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ABSTRACT

This study examined research from 1980 to 1992 that addressed characteristics of high school dropouts. Data from 32 empirical studies were synthesized into an integrative review. A list of the most common characteristics of high school dropouts was generated and the major policy issues related to dropping out were identified and addressed. Four major categories of dropout characteristics were found: demographic, social and family, deviant behavior in society, and in-school. Some of the more common characteristics of dropouts included ethnicity, low socioeconomic status, coming from a single-parent family, a high rate of absenteeism, disciplinary problems, grade retention, low academic performance, and poor achievement test scores. The major policy issues related to the dropout problem included: the lack of a uniform definition of the term dropout; the inaccuracy of statistics measuring local, state, and national dropout rates; the correlation between grade retention and dropping out; the dropout rate in special education; and the need for more research on how many dropouts return to school or receive their Graduate Equivalency Diploma. Further investigation is needed on the role of the family in a student's decision to drop out of high school, the impact of peer influence, and the dropout problem in special education. (RJM)

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AN INTEGRATIVE REVIEW OF RESEARCH ON CHARACTERISTICS OF DROPOUTS

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ABSTRACT OF DISSERTATION
AN INTEGRATIVE REVIEW OF RESEARCH ON CHARACTERISTICS OF DROPOUTS

This study examined the empirical research studies from 1980 to present that address characteristics of high school dropouts. Data from 32 empirical studies were synthesized into an integrative review. A list of the most common characteristics of high school dropouts was generated, and the major policy issues related to the dropout problem were identified and addressed.

The study found four major categories of factors characteristic of dropouts: demographic, social and family, deviant behavior in society, and in-school. Findings showed the most common characteristics of dropouts include ethnicity, low socioeconomic status, coming from a single-parent family, high rate of absenteeism, involvement in discipline incidents, grade retention, low academic performance, and poor achievement test scores. The major policy issues related to the dropout problem are the lack of a uniform definition of the term dropout; the inaccuracy of statistics measuring local, state, and national dropout rates; the relationship between grade retention and dropping out; the dropout rate in special education; and the need for more research into how many

dropouts return to school or receive their Graduate Equivalency Diploma.

The the literature review and the integrative review suggest a clear link between grade retention and dropping out and raise questions concerning grade retention policies in schools. The results also suggest a need for further research on the role of the family in a student's decision to drop out of high school, the role of peer influence in the dropping out process, and the dropout problem in special education.

This dissertation is dedicated to my grandmother, Helena Borcic, who taught me the importance of both formal and informal education. Her wisdom, guidance, and love provided the foundation upon which my education and career has been built. This dissertation would not have been possible without her.

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CHAPTER ONE

Introduction

Introduction to the Problem

During 1990, the Bush administration and the National Governor's Association adopted six national education goals aimed at making America's educational performance second to none in the 21st century (Walker, 1990). These national goals focus on the major educational policy issues of the 1990s and are part of an agenda aimed at improving the nation's schools. One of these goals addresses one of this nation's largest domestic problems, the number of students who drop out of high school. This goal is that by the year 2000, the high school graduation rate will increase to at least 90%. To meet that goal, the nation must dramatically reduce the number of students who drop out of high school. One of the objectives of this goal is that 75% of those students who drop out will successfully complete a high school degree or its equivalent (Walker, 1990). This national goal reflects the greater federal emphasis on programs that target students at risk of school failure and dropping out. The federal government is continuing to provide funding for programs that address the dropout problem and to look for strategies to help individual states in their effort to seek their own solutions to the dropout dilemma.

According to the Bureau of Census in 1984, nearly 500,000 students dropped out of grades 10 through 12 in American high schools. Today the dropout problem has reached epidemic proportions and continues to grow. One out of four of this country's youths will not graduate from high school. With these statistics in mind, the education community is looking for solutions. As is seen in the educational goals set by the nation's governors and the President of the United States, dropout prevention is emerging as the newest focus in providing youth the education they need to function successfully in our society and economic system (Peck, Law, & Mills, 1989). Over the past decade, the dropout problem has become a fertile ground for educational researchers. Numerous national and local studies have been conducted on aspects of the problem ranging from characteristics of dropouts themselves to characteristics of successful dropout prevention programs. In fact, more research has appeared on the problem of dropouts in recent years than did in the previous twenty years (Rumberger, 1986).

The first step in dropout prevention is the identification of those students who are at risk of dropping out and who have dropped out. The ability to identify potential dropouts is an important prerequisite for the development of any effective dropout programming or prevention measure. Self (1985)

conducted a literature review of dropout characteristics and found that most researchers agreed that if characteristics of dropouts could be accurately determined, part of the problem could be treated. As a result, numerous empirical studies containing information on the characteristics of dropouts have been conducted. This research has been conducted on national, state, and local levels and at locations throughout the country. Although the research is available, there is no easy way to access the results. "Missing from any attempt to address the problem of increasing numbers of dropouts is a coherent and easily accessible source of data on the actual at-risk population of young people" (LeCompte & Gobel, 1987, p. 250). In addition, since there is no current uniform definition of dropout, interpretation of dropout statistics and research is difficult and comparisons of dropout rates are often invalid. Differences in collecting styles make it impossible to add the numbers to arrive at an estimate of the size of the at-risk population in each state (The Charles Stewart Mott Foundation, 1988). The lack of a uniform definition, no accessible database, and inconsistent numbers make profiling the dropout a difficult task. In addition to the problems stated above, most dropouts do not participate in an exit interview before they drop out making it difficult for researchers and school officials to obtain an accurate profile of the student who is in danger of dropping

out. School officials who need this data usually rely on a handful of national longitudinal studies describing the characteristics of dropouts or they conduct their own local study (Gastright & Ahmad, 1988). What results is a body of research from different areas of the United States on characteristics of dropouts.

Statement of Problem

Over thirty empirical studies on the characteristics of dropouts have been conducted over the past ten years and have never been analyzed and summarized. The synthesis of ten years of research into one review would identify general trends, add significantly to the current body of knowledge on the characteristics of dropouts, and give future researchers and policymakers critical information. "Given the cumulative nature of science, trustworthy accounts of past research form a necessary condition for knowledge building" (Cooper, 1989, p. 11). The advantage of an integrative review is that each study is examined in light of all the others, creating a broad context and perspective. This broad perspective will enrich the existing picture of a particular topic, in this case characteristics of dropouts. "The transformation of useful data into usable information should provide educators with a richer clearer set

of instructional, organizational, and administrative choices" (Kaufmann, Kameenui, Birman, & Danielson, 1990, p. 111).

The studies that have been conducted to date represent the local, state, and national levels making it difficult for policymakers and school officials to reach definite conclusions about what this research says about the characteristics of dropouts. In addition the sample sizes of the studies vary from extremely large (i.e., the High School and Beyond Survey [HS & B Survey] with a sample size of 10,000) to very small (i.e., local studies with sample sizes of 10 - 50). Making generalizations from smaller dropout populations used in empirical studies to larger populations of dropouts is difficult, but when combining these smaller studies with the larger ones, the results become more meaningful. An integrative review accomplishes this.

"The popular press has given considerable attention to the dropout problem, but, because of uneven data gathering and reporting practices, the press has been unable to provide accurate information about the dimensions of the problem" (Barber & McClellan, 1987, p. 264). An integrative review provides concise and accurate information based on empirical research. A local dropout study showed that characteristics of dropouts differ from community to community and that comparisons of local characteristics with national sample studies cannot be made (West, 1991). This supports the belief

that the dropout problem is very complex. An integrative review sheds light on the complexity of the issue and merges the local and national data in a way that can be interpreted accurately.

According to West (1991) in her book Effective Strategies for Dropout Prevention of At-Risk Youth, characteristics of dropouts or students at risk of dropping out are usually gathered from research literature, students records, and other sources. An integrative research review solely focusing on this topic will give policymakers, school officials, and others needing this information easier access to it. Besides illuminating the existing research on characteristics of dropouts, an integrative review helps people who create and influence the direction of policy make informed decisions. A rigorous scientific summary of research is a valuable supplement to policy-related conflicts (Light & Pillemer, 1984). "Policymakers may not lack advice, but that advice could be enriched through clearer connections with existing scientific knowledge" (Light and Pillemer, 1984, p. 17). An integrative review is this connection.

Purpose of Study

The purpose of this study was to examine the empirical research from 1980 to the present on characteristics of high school dropouts and to synthesize and summarize the

information from these studies into an integrative review. In addition, a list of the most common characteristics of high school dropouts was included. Major policy issues related to the dropout problem were also addressed within the review.

Research Questions

The research questions addressed in this dissertation are based on the analysis of existing studies.

According to the existing research;

1. What are the major categories into which the characteristics of dropouts fall?
2. What are the common characteristics of dropouts?
3. What are the major issues which surround the identification of dropouts?
4. What policy issues emerge from the research regarding characteristics of dropouts?
5. How are the studies divided among the state, local, and national levels?

Assumptions

The researcher assumes that the studies chosen for this review were reported accurately. It is also assumed that state and local areas differ in data collection methods for computing the numbers of dropouts and computing the individual characteristics of these dropouts. According to West (1991) the issue of measuring and clarifying the confusion about dropout

rates is one of the major problems facing educators today. It has become apparent that the inability to collect accurate statistics on dropouts and the lack of a uniform definition are issues that need to be addressed before effective policies are implemented (Casserly & Stevens, 1986; Williams, 1987). Unfortunately, it is impossible to account for the differences in state, local, and national data collection methods in the results of this review.

It is assumed that the definition of dropout varies among the studies reviewed for this dissertation. The variety of definitions used to identify dropouts is one source of confusion surrounding the dropout rates (Williams, 1987). It is important to understand this issue because these definitions determine state programming (Isenhart & Bechard, 1987). It is apparent that there is no common definition for the term dropout (Hamby, 1989; Pallas, 1987). This lack of a uniform definition hinders policymakers and school officials in trying to collect accurate statistics (Rumberger, 1986; Williams, 1987). The term dropout seems relatively straightforward. The Bureau of Census defines dropouts as "persons who are not enrolled in school and who are not high school graduates." Orr's book (1987) Keeping Students in School, says a dropout is a student who withdraws from school without a high school diploma and without enrolling elsewhere. Although the

specific wording and criteria used varies across states, the majority define dropout as a student who leaves school before graduating and does not transfer to another school (Casserly & Stevens, 1986).

Limitations

The research designs of the current studies cover the entire spectrum from the extreme qualitative to complicated numerical statistical analysis. This raises the question of how to validly combine such diverse results. "In contrast to primary researchers, research reviewers were not obligated to apply any standard analysis and interpretation techniques in the syntheisis process" (Cooper, 1984, p.82). Light and Pillemer (1984) assert that this decision to combine results from such different designs should be dictated by good sense rather than available statistical techniques. The key issue is how clearly the concepts in the studies are presented in an integrated manner. The reviewer has to use expert skill and judgement in analyzing the studies to decide whether or not the results should be combined. If the reviewer decides the studies can be combined, then he or she must decide the optimal way to do so. Because of the nature of the research on the characteristics of dropouts, combining the studies using statistical methods is impossible. However, the results of the research can be combined in a narrative synthesis and using a table specifying

which studies found certain characteristics signifcant in the dropping out process. In chosing the studies for the review, every study that mentions "characteristics of dropouts" is not included here. For example, one study may include information on characteristics of dropouts from an alcoholics anonymous group. This study would be excluded because it does not deal with people who dropout of school and considers a number of other complex issues that would obscure the focus of this research.

Definitions

Dropout - a student leaves school before graduating without transferring to another school or educational institution.

Student at risk of dropping out - a high school student who is in danger of leaving school before graduation.

Academic record - a student's record of school performance.

Socioeconomic status - a person's social and economic status.

Parental education level - the level of education completed by a parent.

Self-concept - an individual's perception of him/herself.

Grade retention - repeating one or more grades in school.

Disadvantaged - individuals who have economic or academic hardships including members of economically deprived families, migrants, individuals of limited English proficiency.

Dropout rates - any one of three methods of measuring the number of students who drop out of high school. The three types of rates are (a) event rates that measure the proportion of students who drop out in a single year without completing high school, (b) status rates that measure the portion of the population who have not completed high school and are not enrolled at one point in time, regardless of when they dropped out, and (c) cohort rates that measure what happens to a single group of students over a period of time.

Characteristic(s) - a distinguishing attribute or element. This is also referred to as a factor.

Policy - a plan or course of action designed to influence and determine decisions and actions.

Completion - having finished a high school special education program without receiving a diploma.

Diploma - a document issued by a high school testifying that a student has earned a degree or finished a course of study.

Summary

This study integrates ten years of empirical research on the characteristics of dropouts. Based on this research, a list of the most common characteristics and major policy issues surrounding the dropout problem are included.

CHAPTER TWO

Review of the Literature

Introduction to the Dropout Dilemma

Two bodies of literature relate to the dropout problem, one consists of empirical studies and the other of conceptual literature. The conceptual literature consists of policy and position papers, research briefs, and literature reviews addressing the issues surrounding the dropout problem. Because the body of this dissertation is an integrative review of empirical studies, the literature review focuses on the conceptual literature. The purpose is twofold (a) to provide a context in which to better understand the integrative review of the empirical studies, and (b) to give the reader the critical background information necessary to put the studies into proper perspective. This is achieved by a discussion of (a) the dropout problem as a whole, including the incidence, causes, and consequences of the problem; (b) inaccurate dropout statistics and record keeping; and (c) the lack of a uniform definition of dropout.

Overview

Incidence

The dropout problem in this country has been in the forefront of educational policy issues for the last two decades.

President Bush and the National Governors' Association have set a joint agenda for improving the nation's schools by setting 6 national goals and 21 objectives for education. One of these goals is: "By the year 2000, the high school graduation rate will increase to at least 90%." The objectives under this goal include: "The nation must dramatically reduce its dropout rate and 75% of those students who drop out will successfully complete a high school degree or its equivalent" and "The gap in high-school graduation rates between American students from minority backgrounds and their nonminority counterparts will be eliminated." With all this recent attention focused on the dropout issue, Fernandez and Shu (1988) point out an interesting paradox: the number of students graduating increased from 10% in the 1900s to around 50% in 1950 to a current plateau of approximately 75%.

Research in the field gives the following explanation for the increased interest in the dropout problem: (a) although there has been a long-term decline in the overall dropout rate, the short-term rate has remained steady; (b) minority populations, which have always had a higher dropout rate, are increasing in the school systems; (c) the educational requirements for work will increase in the future; and (d) politically, it does not look good for a local school system to have a high dropout rate (Rumberger, 1986).

Dropout prevention is now emerging as the newest focus in providing youth the education they need to function successfully in our society and economic system (Peck et al., 1989). Part of this focus is on the incidence of dropping out. How big is the problem? Unfortunately, answering this question is difficult because there is no standard definition of who is a dropout and no standard method for computing the dropout rate (Rumberger, 1986). This makes it nearly impossible to gauge just how large the dropout problem truly is at any point in time. Currently, there is no consensus on how to measure or conceptualize the dropout phenomenon (Pallas, 1989).

The inaccurate statistics stem from the variety of ways dropout rates are measured. There are three popular ways to define and calculate dropout rates, each measuring a different facet of dropping out. They are event rates, status rates, and cohort rates (National Center for Education Statistics [NCES], 1991). Event rates measure the proportion of students who drop out in a single year without completing high school. These rates can be compared from year to year to see if they are increasing or decreasing. Status rates measure the proportion of the population that has not completed high school and has not enrolled at one point in time, regardless of when they dropped out. Status rates represent the cumulative impact of

annual event dropout rates over a number of years. Cohort rates measure what happens to a single group of students over a period of time. This rate is usually used in longitudinal measures (NCES, 1991).

There are a number of sources for national statistics on the incidence of dropping out in the United States. Since 1988, the NCES has annually collected and published information on the condition of education in the United States. It utilizes the Current Population Survey conducted by the Bureau of Census and the National Education Longitudinal Study of 1988 (NELS-88). NCES instituted the National Longitudinal Studies to study the educational, vocational, and personal development of high school students and the personal, family, social, institutional, and cultural factors that may affect that development (Owings & Stocking 1985). Two of the studies from the National Longitudinal Study project are the HS & B Survey and NELS-88. The HS&B Survey was initiated in order to capture changes that had occurred in education-related and more general social conditions, in Federal and state programs, and in the needs and characteristics of students. The study was designed to maintain the flow of education data to policymakers at all levels. NELS-88 is a longitudinal effort designed to provide trend data about critical transitions experiences students have as they leave elementary school and progress through high

school and college or their careers. Underlying these features is a central theme that education in America must be understood as a lifelong process woven into a complex social context (NCES, 1990).

Every year the NCES publishes the current dropout rates based on information from NELS-88. The statistics from the 1990 Dropout Rates in the United States updates data on event and status rates and presents cohort rates from the eighth-grade class of 1988. The results show national dropout rates have declined over the last decade. The event dropout rate for persons 15 through 24 years old in grades 10-12 was 6.2% in 1980 and 4.1% in 1990. The status dropout rate for persons 16 through 24 years old was 14.1% in 1980 and 12.1% in 1990. Analysis of dropout rates for 1990 by selected demographic characteristics reveal consistent patterns across all three (event, cohort, status) national dropout rates. Male and female dropout rates are comparable, central city rates are higher than suburban rates, and rates for Hispanics are higher than rates for whites (NCES, 1990). The General Accounting Office (GAO), which conducted research using the data from the Current Population Survey on the number of dropouts and the factors related to dropping out, found that for the 10 years between 1975 and 1985, the dropout rate for youth 16-24 remained roughly the same, about 13-14 percent. The NCES's data from

the HS & B Survey support this showing that 14% of high school sophomores in the spring of 1980 dropped out before their expected graduation date of 1982.

While the national data addresses the problem in regular education, the extent of the dropout problem for special education students is nearly unknown (Jay & Padilla, 1990). There is, however, some data available. According to the Office of Special Education Programs in the U.S. Department of Education, 27.4% of all special education students left the educational system by dropping out (MacMillan, 1991). When examining this national data, it is important to note that different states use different policies and accounting procedures for characterizing a special education student who drops out of school. Some states award certificates of attendance or alternative diplomas and other do not. "Such variations in policy and accounting procedures greatly confuse any attempt to estimate the magnitude of the dropout problem among special education students" (MacMillan, 1991, p. 4).

Not only is there limited national data available, but also limited empirical research which focuses on the dropout problem in special education. One of the few studies which does address dropouts in special education is the Owings and Stocking (1985) study of students identifying themselves as handicapped from the HS&B Survey. They found that of the

students who identified themselves as handicapped in 1980, 18.8% left school before graduation. Of the same population, in 1982, 15.3% left before graduation. It was also interesting to note that the profile of the student with a disability that emerged from the Owings and Stocking study was similar to that of the "typical" dropout, including the following characteristics; overrepresentation of Hispanics, low socioeconomic status, poor grades, poor test scores. Wagner (1989) looked at special education dropouts from the National Longitudinal Transition Study and found a picture similar to Owings and Stocking. She discovered that, in general, special education dropouts were younger, male, minority, from lower socioeconomic backgrounds, poorly integrated socially, involved in disciplinary incidences, and had a high rate of absenteeism. An examination of the research addressing various disability categories showed that emotionally disturbed and learning disabled students have a higher propensity than others to leave school before graduation (MacMillan, 1991; Wolman, Bruininks, & Thurlow, 1989). deBettencourt, Zigmond, and Thornton (1989) conducted a study to determine the dropout rates of a sample of learning disabled students in a rural setting and found the dropout rate to be 36%, three times the rate of their nonhandicapped peers. Overall, the research shows that students with disabilities are more likely to dropout

of school than students who do not have disabilities (Lichenstein & Zantel-Weiner, 1988; Wolman et al. 1989). There is general consensus in the research community that the incidence of dropout rates of students with disabilities is an area that needs more research (U.S. GAO, 1987; Lichtenstein & Zantel-Wiener, 1988; Wolman et al., 1989).

Because definitions and local practices vary widely, it is difficult to trust the accuracy the dropout rate (Mann, 1985). With so many different ways of measuring the dropout problem, it is difficult to get an idea of just how big the problem is. However, the statistics from the current national studies provide a valuable general picture. The overall high school dropout rate was not significantly different in 1985 than it was in 1968 (Kominski, 1990). According to the NCES (1991), although dropout rates have been falling for the past 10 years, they remain unacceptably high. Traditionally, the dropout rate has been used like economic indicators, to asses the health of the United States educational system (Pallas, 1989). Therefore, the political community as well as the public view any dropout rate over 10% as poor, despite how this rate compares to previous years. Regardless of the exact numbers, the majority of the educational research community and the public believe that the dropout problem needs to be addressed immediately.

Causes

There are a myriad of reasons that a student drops out of school (Ekstrom, Goertz, Pollack, & Rock, 1986). Rumberger (1986) classifies the causes into several major categories: demographic, family-related, peer, school-related, economic, and individual. The demographic factor most associated with dropping out is a person's minority status (Hahn, 1987). Members of racial and ethnic minorities are more likely to dropout (Frazer, 1991). Since 1978, Hispanics have had a higher dropout rate than any other group (Kominski, 1990). After conducting a review of research on dropping out among language minority youth, Steinberg, Blinde, and Chang (1984) found that these youth drop out of school at a rate that exceeds that of students whose primary language is English. Males and females drop out at approximately the same rate but usually for different reasons (Earle, Roach, & Fraser, 1987).

One family related factor that is an extremely powerful predictor of dropping out is socioeconomic status (Barro & Kolstad, 1987; Steinberg et al., 1984). Poverty is key to the dropout problem (Hahn,1987; Office of Educational Research and Improvement [OERI), 1987) . Gage (1990) agrees, asserting that poverty stands out as the most conspicuous of all the factors associated with dropping out and therefore the characteristics of the poorest people are also associated with

the tendency to drop out of school. He goes on to say that poverty along with cultural differences plays a major role in determining who drops out. Wittenberg (1988) reviewed literature on youth-at-risk and found low parental education level and low income significant in identifying potential dropouts.

Peer influence can have an effect on a student's decision to drop out (Texas Dropout Information Clearinghouse [TDIC], 1989). According to the research, it is still not clear how much influence peers have on a dropout's decision to leave school but many dropouts do have friends who are also dropouts (Rumberger, 1986). In Coladarci's (1983) study of Native American dropouts, over one third of the dropouts said that their desire to be with other dropouts was a salient factor in their decision to leave school. Alpert and Dunham (1986), in their study identifying important factors that keep academically marginal youths in school, conclude that there is no doubt that peer influence is an important determinant of any nonconforming behavior

School-related factors that lead to dropping out are dissatisfaction with teachers, dislike for school in general, lack of credits, boredom/lack of interest, and poor academic achievement (Strother, 1986). Hahn (1987) says that the way a student experiences school is the most frequently cited

reason for leaving early. Additionally, the GAO (1987) states one of the most powerful predictors for dropping out is being behind grade level. Kronick, Peterson, Morton, & Smith (1989) agree, stating that the factors of being behind grade level, and not being in the proper age grade, are highly predictive of dropping out of school. Being held back once increases a student's chances of dropping out by 40-50%; being held back twice increases chances of dropping out by 90% (Bachman, Green, & Wirtinen, 1972). In looking at the trends across four years of research on the characteristics and causes of dropping out in Texas, Frazer (1991) found that being older than average for grade level is the number one overall factor for predicting dropping out. House (1987) wrote about the policy implications of a comprehensive review of all the research on retention and found that the practice of retaining students is a practice contrary to the best research evidence. "Retaining students appears to be a way of instilling the needed skills, though in reality it is a way of increasing the likelihood that students will eventually drop out of school" (p. 211). Truancy and non-attendance are also strong predictors of dropping out (Kronick et al., 1989; Wheelock, 1986). Students may be pushed to where they weigh the perceived costs of staying in school against the perceived benefits of leaving and conclude they may be better off out of school. According to the NCES,

the primary reason students left school before graduation was "school was not for me," poor grades, being offered a job, not getting along with teachers, and expulsion or suspension (Peng & Takai, 1983). Hahn (1987) supports the findings concerning the significance of school-related factors, stating that the most common explanation for leaving school is poor academic performance. Wittenberg (1988) found that poor academic achievement is the single most common characteristic of potential dropouts. In addition, Alpert and Dunham (1986) and the TDIC (1987) found that misbehavior in school is another significant school-related factor in predicting who will drop out. Wheelock (1986) adds that suspension because of inappropriate behavior sends a powerful message to the marginal student saying they do not belong in school.

An additional school-related reason students cited for leaving school is poor relationships with teachers (Wittenburg, 1988). Bryk and Thum (1989) studied the effects of high school organization on dropping out and found that absenteeism is less prevalent in schools where the faculty are interested and engaged with students and where there is an emphasis on academic pursuits. Coladarci (1983) found that the nature of the teacher-student relationship emerged as a salient factor in the decision to dropout. Dropouts perceived teachers as uncaring or unsupportive in their academic efforts.

Economic reasons may also lead a student to drop out of school. Many students in the HS & B Survey report leaving school because of employment opportunities (Peng & Takai, 1982). It is often the case that these students need to work to help their families. Many student drop out of school to work because they find work more enjoyable and important than school (TDIC, 1987). More than 25% of the male dropouts in the HS & B Survey chose to work rather than continue their education. The GAO (1987) conducted a review of national survey data and research information on the factors relating to students dropping out of school and found that students who leave school in order to work have relatively little knowledge of the labor market. As a result, they are unable to see the bleak employment prospects in the future.

In addition to economic, demographic, and school-related factors, there are many individual factors that can cause a student to drop out of school. These individual factors include pregnancy, getting married, low self-esteem, feeling a lack of control in their lives, and low occupational aspirations (Earle et al., 1987). According to the TDIC (1989), most potential dropouts are capable of handling school work but have become defeated learners because of a lack of self-confidence or problems at home. Pregnancy is a big impetus for dropping out. Four out of five girls who become pregnant in high school

drop out (Hahn, 1987). The TDIC found pregnancy is the most common reason that females leave school.

Hahn (1987), drawing on research and interviews with dropouts, summarizes by listing seven major risk factors associated with dropping out of school: (a) falling behind grade level, (b) poor academic performance, (c) repeated detentions and suspensions, (d) pregnancy, (e) learning disabilities and stress, (f) language difficulties, and (g) the attraction of work. At the present time, no one knows exactly what causes a student to leave school.

> Most students quit because of the compounded impact of, for example, being poor, growing up in a broken home, having been held back in the fourth grade, and finally having slugged 'Mr. Fairlee,' the schools' legendary vice-principal for enforcement (Mann, 1986, p. 5).

Fortunately, using the research on characteristics of dropouts, educators can get a relatively accurate idea of who is at risk of dropping out.

Consequences

Since education is generally regarded as a means for social mobility, those who fail to complete high school damage their chance for future success (Pallas, 1987). There is no doubt in the education community that the consequences of

dropping out are serious not only for the individual but for society as well. Among the societal consequences are; the lack of skilled workers in the labor force, high unemployment rates, and increased welfare dependency and other demands on social services (Rumberger, 1986; West, 1991). The individual suffers because he or she cannot find a steady well-paying job. With continually advancing technology, many jobs now and in the future will require sophisticated skills that high school dropouts do not have. According to the William T. Grant Foundation's report on non-college bound youth in America (1988), in a highly competitive economy, people with advanced skills will succeed. The OERI (1987) concurs, stating that well-paying jobs for those failing to graduate have dwindled as the United States has moved from an agrarian to a manufacturing to a service economy. More sophisticated skills are needed with the advanced technology of today. As a result, those who drop out of high school must scramble for the remaining jobs that are neither steady nor well paid. As time goes on, the dropout falls further behind because there are fewer opportunities to get the additional education and training necessary for career advancement (Rumberger, 1986). The William T. Grant Foundation predicts that in the future the U.S. population may be divided by education rather than geography or race.

The economic cost of the dropout problem is staggering (Pallas, 1987). The GAO Study (1987) showed that as of October 1985, only 68% of the dropouts in the 16-24 age group were in the labor force, in contrast to 87% of the graduates not enrolled in school. Furthermore, the dropouts who were employed were in lower-skilled jobs than the high school graduates. In 1984, the median monthly income for a person without a high school diploma was $693, compared with $1,045 for persons with only a high school diploma only (Jay & Padilla, 1990). According to a recent estimate, lost lifetime earnings exceed $200,000 per dropout and $200 billion for each school class across the United States (Catterall, 1986). Within the group of high school dropouts, average income has declined since 1973. In 1986, dropouts between the ages of 20 and 24 earned 42% less than in 1973 (The William T. Grant Foundation, 1988). Weidman and Freidmann (1984), in their article on the school-to-work transition of the high school dropout, agree that the dropout's earnings and employment prospects are considerably poorer than those who do not drop out. In summary, dropouts earn less than graduates, are more frequently unemployed, and are more likely to be found in lower level jobs. This all adds up to a difference in the quality of life between a dropout and a graduate (Barro & Kolstad, 1987).

Inaccuracy of Statistics

The graduation rate has become a commonly-used indicator of the condition of education in this country. One example of this is the 90% graduation-rate goal of the President and National Governor's Association. "A dropout rate is often a single number to which people can easily attach a judgement about the condition of their schools" (Pallas, 1989, p.101). A high rate of high school dropouts threatens the image of equality of educational opportunity associated with education in the United States. However, there is no consensus on what makes a secondary education system healthy, thus it is a matter of judgement as to whether or not dropout rates or graduation rates can be considered accurate indicators of the health of our education system.

State dropout rates have been reported from 11 to 45%, but because of the condition of national education statistics the accuracy of these rates cannot be determined. (Council of Chief State School Officers [CCSSO], 1986; Pallas, 1989). Gage (1990) wrote an article examining the feasibility of the President and National Governor's Association goal relating to the graduation rate. He asserts that the inability to measure the dropout rate or the graduation rate accurately will make it difficult to measure whether or not this goal is achieved. Success or failure in reaching the goal cannot be measured using

inaccurate statistics. Kominski (1990) agrees stating "effective strategies for addressing dropouts as a national problem cannot proceed when the basic measure is in dispute" (p.303). Regardless of whether or not the graduation rate is seen as a social indicator, this inability to measure it accurately raises a number of national, local, and political issues.

When researchers address the question of the national dropout rate the two underlying assumptions are that complete, accurate numbers on dropouts, and a single method for calculating that statistic exist (Hamby, 1989). Neither of these assumptions are true. "Missing from any attempt to address the problem of increasing numbers of dropouts is a coherent and easily accessible source of data on the actual at-risk population of young people" (LeCompte & Gobel, 1987, p. 250). The size of the dropout population depends in large part on the way it is defined (Olson, 1990). Several of the often used statistics in measuring the dropout problem are biased and may overestimate the extent of the problem (Kominski, 1990). Currently, the general perception persists that the dropout rates are soaring, in part because when high rates are reported no mention of how they were calculated. The Institute for Educational Leadership (1986) concluded that data collection on the dropout problem is poor and not standardized. As a result, interpretation of dropout statistics is difficult and

comparisons of dropout rates are often invalid (Barber & McClellan, 1987; Bhaerman & Kopp, 1988; Casserly & Stevens,1986; Hahn,1987; Morrow, 1986; Pallas, 1987; Rumberger, 1986). Comparing dropout rates is like comparing apples and oranges (Casserly & Stevens, 1986; Williams, 1987).

The inaccuracy of statistics comes from the differences in the way dropout rates and graduation rates are calculated. Morrow (1986) reports that there are three factors that influence the mathematical computation of the dropout rate: (a) the time frame during which the number of students who drop out is counted, (b) the range of grade levels selected to represent the pool of possible dropouts, and (c) student accounting procedures. Considerable confusion exists over the distinction between rates in the calculation of dropout statistics -- a dropout rate can be the proportion of persons in some population of interest who have dropped out of school, without regard to when this event may have occurred (Pallas, 1989). Dropout rates may be calculated in a variety of ways depending on what facet of dropping out is being measured. Unfortunately, when dropout rates are reported, not all of the information is given.

Dropout statistics generally include three types of dropout rates; cohort, event, and status (NCES, 1990). Cohort data refers to what happens to a cohort of individuals defined

by having experienced some demographic event in a common period of time. An example is all students entering ninth grade in 1985. Tracking the experiences of a cohort requires longitudinal data. Event data refer to the proportion of students who drop out in a single year without completing high school. Event rates are used to compare the number of students who leave school each year to the previous year. Status dropout rates measure the portion of the population who have not completed high school and are not enrolled in high school at a particular point in time. Status rates are much higher than event rates because they represent the cumulative impact of annual event dropout rates over a number of years. Research has shown that dropout rates are highly influenced by vagaries in the ingredients going into their computation (Olson, 1990). Three factors that influence their computation are time frame, range of grade levels included, and student accounting procedure used (Morrow, 1986).

National Level Statistics

Conflicting data are found at the national, state, and local levels. Federal statistics on school dropout and completion have been a source of great confusion in recent years. There are four primary sources of national statistics on dropouts: the Bureau of Census' Current Population Survey, NCES' Common Core of Data, NELS1988, and NCES' HS&B Study. After

conducting these four studies, the GAO (1987) admits that there is no single reliable measure of the national dropout rate. According to the Institute for Educational Leadership (1986), the HS & B Survey shows a national dropout rate of 14%; the Census Bureau sets the rate at 18%; and the NCES Common Core of Data says that the dropout rate is 28%. The Institute suggests 24% as a reasonable estimate of the national dropout rate.

Addressing the heart of this issue on the national, state and local levels, Ligon, Stewart, and Wilkinson (1990) collected dropout rate formulas from around the nation, analyzed them, and demonstrated how differences in these formulas affect the various dropout rates. Without a standard method, they found comparing dropout rates across states and within states without any standard method frustrating, confusing, and often misleading. An additional point of confusion for the public is when national dropout rates are reported and no mention is made of who is defined as a dropout and how the rates were calculated. The authors agree that there is no simple answer but that it would be beneficial for the sake of public understanding and for comparability, to attempt to move toward standardized definitions and formulas. The research clearly shows that the inability to collect accurate and consistent data is a problem on the federal, state, and local

levels. This problem at the national level prohibits state officials from getting a firm grip on the dropout problem and makes it impossible to draw meaning from these statistics.

Local Level Statistics

The differences across school districts and schools in the ways dropout and graduation rates are calculated, (i.e. the definition of dropout, the definition of the base population at risk of dropping out, and the period of time being measured) make local school district dropout rates problematic as education indicators (Pallas, 1989). School districts calculate the dropout rate in different ways. Some count only high school students and a few of them keep data on elementary, junior high school, or special education dropouts (Strother, 1986). A definite barrier for local school districts to collecting accurate statistics is the difficulty in obtaining specific information on the dropouts themselves. Because most dropouts do not participate in an exit interview before they drop out, it is difficult to obtain accurate information on the student who is at risk of dropping out. Local school officials who need this data usually rely on national reports or they conduct their own local study (Gastright & Ahmad, 1988). Regardless of the method, local officials need this information in order to begin to design dropout-prevention measures. State and local policymakers also need the information to make

critical decisions effecting funding for programs and related policies. Unfortunately, dropout rates that reflect a variety of accounting methodologies cannot be used to assess educational policies or design new programs (Williams, 1987). Hammack (1986), however, did find when examining statistics from six major cities, that the national survey data are useful in providing a measure against which to examine the local data.

Currently, differences in conceptualization and measurement are large enough to make comparisons across local school districts meaningless. As a result, much of the work done on the issue of counting dropouts has been documenting the various methods school districts use to calculate their dropout rates (Pallas, 1987). This work has shown that dropout rates can change as a result of the way and accuracy with which they are measured. In Dallas, when the school district implemented new accounting procedures, the dropout rate went from 21% to 16% solely as the result of the new accounting procedures and keeping a record of requests for student transcripts (Olson, 1990). One of the major factors affecting the dropout rate was whether or not "no shows" or students that did not show up for school at the beginning of the year should be counted as dropouts. Olson's research shows that most of the students in Dallas listed as no shows can reasonably be assumed to be attending school elsewhere.

Therefore, if all the local school districts did not include the no shows in their dropout rate, it can be assumed the rate would decrease. This is just one example of how the change in accounting procedure by the manipulation of one aspect of the definition of dropouts influences the statistics.

Political Interests

The data collection issue is not only technical but political as well (Institute for Educational Leadership, 1986). To avoid the political and social embarrassment of a high local dropout rate, local school districts may define dropouts and collect statistics in a way that downplays the problem. Statistical manipulations can have the effect of trivializing the dropout problem (Hahn, 1987). On the other hand, some local school districts and states collect data on dropouts and define terms to make the problem appear more serious than it actually is. By doing so they will be eligible for more Federal and state funds (Placier, 1988). Clements (1990) reports that there are disincentives to accurate reporting of dropout statistics (i.e., funds are tied to low dropout rates, dropout rates are used as an indicator of school performance). She goes on to state that since identifying a student as a dropout has been far from clear-cut, data providers are often in a position of making subjective judgements. Hahn, who wrote a position paper on the state of the dropout problem for The Institute for

Educational Leadership, raises the question of public accountability. A uniform method for collecting statistics would substantially reduce the current problem of statistical manipulation for political and funding reasons and would provide a means of holding local school districts accountable for the accuracy of their statistics.

Strategy for Improvement

The Council of Chief State School Officers along with the NCES (1986) in its report describing the Council's recommendations for more accurate, comparable, and timely state of national dropout statistics, determined that the major strategy for improving dropout statistics is to obtain agreement on data elements to be collected across all states, and to establish definitions and specific criteria to be used by all states in collecting these elements. Establishing a national dropout statistical base, however, raises a myriad of additional questions to be answered. Some of these questions are:

1. Who is considered a "student" - special education students?, students in juvenile institutions? To get an accurate dropout statistic all calculations must begin with the same base population.

2. What is the difference between leaving school and transferring?

3. How are suspended students or expelled students categorized?

4. If a student transferred from a school to a correctional facility, did he transfer or dropout?

5. When should enrollment/dropouts be counted--fall-to-fall or fall-to-spring?

6. Within dropout counts, what breakdowns of data are needed (CCSSO, 1986)?

In establishing a definition of a dropout, each of these situations is carefully considered, first from the standpoint of the usefulness of data, and then from the feasibility or the availability of information at the state level.

Clements (1990) states, as many others have, that in order for dropout statistics to provide meaningful information, data must be collected according to the same definitions, using the same procedures, and over the same period of time. Morrow (1986) proposes a state-level tracking system and incentives for accurate reporting. Currently, this is not being done at the local, state, or national levels making it very difficult to analyze any dropout statistics or integrate studies containing dropout statistics. Kominski (1990) proposes using a new measure, one that measures the proportion of high school students who drop out in a year. He contends that this measure would come closest to defining the true dropout rate

or "the speed with which the event occurs over a defined period of time" (p. 303). "The ability to generate a consistently defined measure from an ongoing data source, across time and sociodemographic subpopulations, places it at great analytic advantage over any of the other commonly used dropout measures" (p. 305). What works in dropout prevention programs cannot be determined because an inaccurate count of dropouts makes it impossible to gauge whether any measure is alleviating the problem (Mann, 1986). Recognizing this, the National Education Goals Panel (that monitors the nation's and states' progress towards meeting the President's and National Governor's Association's six goals) determined that defining and measuring the high school graduation and dropout rates are the most significant ways to measure the progress toward the goal of a 90% graduation rate (National Education Goals Panel, 1991).

Definition Issues

One source of confusion directly related to the inability to measure dropout rates accurately is the variety of definitions of the term dropout (Williams, 1987). The term dropout has been used to designate a variety of students who leave school early including pushouts (undesirable students), disaffiliates (students no longer wishing to be associated with the schools), educational mortalities (students failing to complete a

program), capable dropouts (family socialization did not agree with school demands), and stopouts (dropouts who return to school, usually within the same academic year) (Morrow, 1986). The term dropout has no common definition (Hamby, 1989; Hammack, 1986; Pallas, 1987). Data from local school districts reflect local definitions, making comparisons between school districts meaningless (Barber & McClellan, 1987). This lack of a uniform definition keeps policymakers and school officials from collecting accurate statistics (Rumberger, 1986; Williams, 1987).

Different Definitions

The Bureau of Census defines dropouts as "persons who are not enrolled in school and who are not high school graduates." Orr (1987) said that a dropout is a student who withdraws from school without a high school diploma and without enrolling elsewhere. Although the specific wording and criteria used varies across states, the majority define dropout as a student who leaves school before graduating and who does not transfer to another school (Casserly & Stevens, 1986). Most states add qualifiers to this definition, such as exemption because of death or extended illness. Below are examples of the definition of a dropout from five cities:

1. *Atlanta, GA:* "Any person who leaves school prior to graduation or the completion of a formal high school education

or legal equivalent, who does not within forty-five days enter another public or private educational institution or school program."

2. *Indianapolis, IN:* "Any entering freshman who does not graduate with their class."

3. *Los Angeles, CA:* "Any senior high school student who left school before graduating because of overage, went to work full-time, institutionalization, entered military, pregnancy, marriage, excluded or the whereabouts unknown."

4. *Milwaukee, WI:* "Any student who stops attending and has no intention of re-enrolling in another diploma granting school."

5. *Portland, ME*: "Any student who left school and did not return or graduate between October 1 and June 30, 1985."

Barr (1987) found a variety of definitions of a dropout, the elements of which may be interpreted in various ways, further complicating the definitions.

Reporting Practices

As is evident from the sample of definitions, whether a student is counted as a dropout may be a subjective judgement. Barber and McClellan (1987) undertook a study to show how discrepant current reporting practices are, hoping to demonstrate the need for a workable definition of dropout and the standardization of reporting procedures for school districts.

They concluded that policymakers at the state and district levels need to achieve a consensus on the definition of a school dropout. The technology and personnel for gathering the information necessary to establish a single reporting procedure are available but are not currently being used to this end.

In their study of procedures for counting dropouts in states, Casserly and Stevens found enormous variation. For example, a student who joins the military or has an extended illness and is kept from attending school may or may not be considered a dropout. Definition of dropouts among special education students pose a special problem because some of them may be exempt from minimum competency tests and may not receive a regular diploma (Casserly & Stevens, 1986). Should these students be considered dropouts because they did not meet the same requirements as those who receive diplomas? These are just a few of the issues local school districts must consider as they attempt to define who has and has not dropped out of school. Casserly and Stevens concluded that because of the variety of definitions of dropouts used and the methods of collecting statistics, it was impossible to say that one district had a greater or lesser dropout problem than another district.

Ligon, Stewart, and Wilkinson (1990) concluded in their study that the following issues must be resolved when defining a dropout:

1. Who is considered enrolled or not enrolled in school?
2. What is considered an appropriate grace period for a student returning to school before being characterized as a dropout?
3. When is the point of no return for a dropout?
4. What kind of documentation of the alternatives is necessary in order to track students accurately?
5. What are acceptable alternatives to enrollment in a particular school, such as a GED program or transferring to another school?

Transferring itself can be a complicated issue (Morrow, 1986). For example, to what schools is it considered appropriate for a student to transfer--state correctional facilities, vocational training schools?

In addition to the numerous questions that have to be answered to establishing a definition for dropout, some districts compound the problem by changing the definition from year to year. Many districts define dropout to match the purpose for which the statistics are being kept (Hammack, 1986). Because some states distribute funds based on the number of students a school claims to serve, it is to their

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benefit to have as many students on their enrollment list as possible (Morrow, 1986). This practice results in inaccurate dropout figures.

Establishing a Uniform Definition

One solution to the problem of the variety of definition of dropouts is to establish a uniform definition. Policymakers should provide assistance in determining an appropriate definition of dropping out so that accurate information on the incidence of dropping out can be collected and used to establish policy priorities (Rumberger, 1986). Morrow (1986) presents three criteria for a uniform definition. They are (a) Is the student actively enrolled? (b) If not, has the enrollment been formally transferred to another institution? (c) Has the student earned a high school diploma or its equivalent? The student would be categorized as a dropout if all the answers were no.

Mann (1985), who published a report based on the proceedings of the National Invitational Working Conference on Holding Power and Dropouts in New York, found that although everyone agreed about the gravity of the data problem, enthusiasm for solving it was constrained. Establishing a uniform definition could require expensive and difficult changes in current established accounting procedures. Williams (1987) identified five potential barriers to creating a uniform definition. They are (a) technical feasibility, (b) lack of

support in implementation, (c) opposition or resistance to change, (d) lack of knowledge necessary to implement a change, and (e) lack of resources or absence of funds. Although solving this problem appears to be difficult, Mann contends that without better data no one can argue the case for more attention to this area.

Summary

Before reading the synthesis of empirical studies on the characteristics of dropouts, it is important to understand the major issues involved. First, background information on the dropout problem provides a context within which each of these studies and the synthesis as a whole can be understood. Second, the issue of inability to keep accurate statistics is critical because all of the studies address dropout statistics in some form or another. Third, the issue of the lack of a common definition of the term dropout is important because all of the studies use this term. "Not the least of the confusion one encounters in grappling with the dropout problem is the absence of stable definitions and the dearth of satisfactory data" (Finn, 1987, p. 6). Although there are many issues related to the dropout phenomenon that the research community agrees remain unresolved, it is still important to use the existing research to expand the knowledge base on the topic of characteristics of dropouts.

"Unless we begin to realize that education needs to be studied empirically and experimentally, as carefully as possible, and using tools of the humanities and social sciences, we will not reach our goals in the year 2000 or in any subsequent year" (Gage, 1990, p. 285). The first logical step in dropout prevention, once the related issues are understood, is the identification of those students who are at risk of dropping out. The ability to identify potential dropouts is an important prerequisite for the development of any effective dropout programming or prevention measure. Lloyd (1978) conducted a study analyzing background characteristics, school performance, and achievement test data of a sample of third-grade boys and girls to determine whether prediction of secondary school completion can be made from data in the third grade. He discovered that as early as third grade, a surprisingly large number of characteristics differentiated dropouts from graduates. He also discovered that a combination of variables predicted dropout or graduation with some degree of accuracy. Lloyd's study shows the value of identifying accurate common characteristics of dropouts which can ultimately be used to target the appropriate intervention. Beck and Muia (1980) state that the key to lowering the dropout rate may lie in the early identification of students at risk of dropping out. Since Lloyd's study, there has been a

great deal of research conducted on characteristics of dropouts. A common set of characteristics compiled from this research on dropouts nationwide serves as a blueprint for identifying dropouts across the country. In addition, a complete synthesis of the research can provide school personnel and policymakers with valuable information for addressing this complex issue.

Studies have been conducted on national and local levels. Although much of the research yields inconclusive information, and some findings may conflict because of different definitions or methods of collecting data, this does not detract from their value (Bhaerman & Kopp, 1988). In addition, there is no easy way to obtain the results of all of this research. What results is a body of research from different pockets of the United States all on dropouts and students at risk of dropping out. "Although the contributions of sociologists, educators, psychologists, and economists, each with somewhat different theoretical perspectives and methodologies, add to the breadth of the literature and to our understanding of the dropout phenomenon, this diversity of approaches makes synthesis of the existing research very difficult" (Weidman & Friedmann, 1984, p. 25).

This research on the characteristics of dropouts needs to be brought together, analyzed, and summarized. Fernandez and Shu (1988) raise the issue of the historical nature of recent

research on the dropout phenomenon, pointing out that it generally ignores previous work done in this area. They add that the frequent initiatives implemented by state legislatures and school districts often ignore other research in the area. A research synthesis combining the results of independent studies is useful to organizations and individuals interested in treating the problem of dropouts and at-risk students, and would result in better identification methods. The problem of dropping out is complex and cannot be treated with simple solutions. A synthesis of the existing research on the characteristics of dropouts is a step taken toward acquiring the information necessary to effectively address the dropout problem. Looking at the data about dropouts should alert educators and policymakers to the importance of school completion, the competing forces that draw young people away from school, and the varying impact of those forces on different kinds of youths (Mann, 1986). The following chapters describe the methodology and results of a synthesis conducted on the research that addresses the characteristics of dropouts.

CHAPTER THREE

Methodology

Statement of Problem

Over thirty empirical studies on the characteristics of dropouts have been conducted over the past ten years and have never been analyzed and summarized. The result of a synthesis of these studies suggest a set of common characteristics of high school dropouts. The synthesis also provides information on the characteristics of each research study. The purpose of this study was to combine ten years of existing research into one integrative review, thus significantly adding to the current body of research on the characteristics of dropouts.

Criteria for Selection of Studies

The studies were selected based on how germane they were to the characteristics of dropouts. The criteria for chosing the empirical studies were as follows:

1. A purpose of the study, either implicit or implied, had to be to identify characteristics of dropouts or to learn more about characteristics of dropouts.
2. The study was conducted no earlier than 1980.

3. The results of the study provided information on the characteristics of dropouts other than simply the demographic information on gender, ethnicity, and age.
4. The sample size of the study was larger than 50.

No efforts were made to assure that the results of the studies supported one another. A good review of research explores the reasons for differences in the results and determines what the body of research, taken as a whole, reveals and does not reveal about the topic (Jackson, 1980). Therefore, part of this comprehensive integrative review included conflicting study results. Researchers may find value in these conflicting results (Jackson, 1980; Light & Pillemer, 1984). The results, among other things, illuminated specific areas in need of further study. All of the studies chosen were based on the criteria stated above.

Search Strategy

One of the tasks of a thorough integrative review is repeated searches of the literature to get the most current information. Light and Pillemer (1984) suggest conducting as wide a search as possible when chosing studies. Focusing on a diverse group of studies helps in suggesting new directions for future studies. To collect appropriate studies for this review, searches were conducted on the following databases: ERIC, Psychlit, Dissertation Abstracts, Exceptional Children, Social

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Science Citation Index, GPO Publications Reference File, NTIS, and Sociological Abstracts. The descriptors used for all of the searches were: dropout characteristics, secondary education, 1980 - present, and dropout research. ERIC yielded the most resources, 193, of which the researcher chose the empirical studies that met the criteria for inclusion in the review. The search of dissertation abstracts produced the three dissertations chosen for the review -- Jenifer, Pallas, and Wilcynski. The Social Science Citation Index provided the Fernandez, Paulsen, & Hirano-Nakanishi, Mensch and Kandel, and Blackorby, Edgar, & Kotering studies. The other searches came up with duplicate studies that indicated the researcher was including the most prominent and widely cited studies on the topic. All of the searches also provided a wealth of background information for use in the literature review.

Past experience has shown that the reference lists of primary sources often yield some of the most beneficial secondary sources. Therefore, once studies were selected from the primary searches, the reference list from each was checked. Fifteen studies were identified. The next step was a critical examination of all the studies collected up to this point. Some of the studies were eliminated because, upon further analysis, they did not fit the selection criteria or provide information on

the characteristics of dropouts. Through this extensive search process, 32 studies were chosen for the review.

The researcher discovered a group of studies conducted for large cities, such as Chicago and Los Angeles, and state studies that provided information on ethnicity, gender, and age of dropouts. Because these studies provided information on only ethnicity, gender, and age, they were eliminated from the comprehensive integrative review. These studies are, however, considered part of the body of empirical research on the characteristics of dropouts, therefore the results are included in a section separate from the integrative review in Chapter Four.

Data Collection Procedures

"The most common challenge of integrative reviews of modern science is finding order in apparent chaos" (Jackson, 1980, p.444). Jackson's methodology for conducting integrative reviews includes the following six basic tasks:

1. Selecting the questions for the review.
2. Sampling the research studies that are to be reviewed.
3. Representing the characteristics of the studies and their findings.
4. Analyzing the findings.
5. Interpreting the results.
6. Reporting the review.

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The search for the 32 studies and the representation of the characteristics of these studies (i.e. #2 and #3 above) are the data collection steps of integrative reviews.

An issue that relates directly to the tasks of collecting data, analyzing the findings, and interpreting the results, is how to effectively integrate qualitative and quantitative results. Both numerical and qualitative information play key roles in a good synthesis (Light & Pillemer, 1984). Jackson, Light, and Pillemer believe that reviewers should work hard to build an alliance of both types of information because each type offers its own unique benefits. Qualitative knowing is the foundation upon which statistical understanding is built (Light & Pillemer, 1984). In fact, most quantitative studies have very valuable qualitative information that will become critical information in an integrative review. The studies chosen for this review used a variety of qualitative and quantitative methodologies. Results of these two types of methodologies will be presented together in chart and narrative form.

The question of how to combine qualitative and quantitative information leads to another question. Which outcomes within a study should be emphasized or included in a synthesis? The decision is left to the reviewer. Different types of results are complementary, and limiting representation of results to combining only the qualitative studies and then

separately combining the quantitative studies imposes unnecessary limits and is contrary to the purpose of the integrative review. More information on the individual methodologies used in each of the 32 studies is included in Appendix A.

The researcher determined that the results of the studies, regardless of particular methodology, should be integrated by each characteristic because characteristics of dropouts were the focus of these studies. Data were extracted and then presented in two ways (a) on charts designed to convey specific information about each study, and (b) in a narrative review of pertinent information on every characteristic included in each study.

Analysis Procedures

Analysis is the process by which the reviewer makes inferences from the primary studies (Jackson, 1980). Once the relevant studies were collected, the information on the characteristics of dropouts was synthesized and summarized for the narrative review. First, a comprehensive list of all characteristics of dropouts, based on the results of these studies, was compiled. Next, the most commonly mentioned characteristics across studies were determined. All studies were then summarized (see Appendix A) specifying purpose, methodology, results, and apparent strengths or weaknesses. A

chart was designed to present the studies, their population, and other critical information that affected the outcomes, including the definitions of dropout used. This chart is part of the overview of the empirical research and is found in Chapter Four. Next, the researcher determined that the narrative synthesis would be presented by characteristic. The pertinent information on characteristics, such as academic performance or socioeconomic status, was then extracted and combined with comparable information from the other studies. The narrative synthesis was then written based on the characteristics and the information from the charts.

The researcher decided to try reanalyzing the statistical results of these studies (as is done in meta-analysis or secondary analysis) despite the questionable validity of doing so. To exhaust all potential analytical methods, a table was made that depicted the numerical results, each dropout characteristic, the total population, and all of the numbers associated with these variables for each study. The results showed the extreme variation in sample sizes (50 to 5000) and the variety of ways to quantitatively express results under each characteristic. For example, one study compared rural dropouts and graduates to urban dropouts and graduates, and another focused solely on the characteristics of minority dropouts. Some studies were broken down by rural and urban

dropouts who displayed a particular characteristic and some by each minority group displaying the characteristic. These studies were difficult to combine because the urban and rural results were not broken down by minority status and vice versa. Another problem arose when analyzing the data from the HS & B Survey. The results were all expressed in weighted percentages, so changing these into numerical results similar to other studies was not possible without the original database. Every possible method for validly reanalyzing the statistical results was pursued. Finally, after consultation with a statistician, the researcher determined that combining these quantitative results would not lead to a valid statistical analysis. The information from this numerical table was converted into a new table identifying the significance of a particular characteristic in determining dropout status. This table is included under "Analysis of Most Commonly Studied Factors" in Chapter Four.

The results of the integrative review, presented in Chapter Four, are a seven charts presenting critical information from each study useful in understanding the synthesis, and a narrative synthesis of the research by each characteristic.

Study Limitations

According to Jackson (1980), who examined methods for conducting integrative reviews, there really is no way of

ascertaining whether a set of selected studies is representative of all existing studies on the topic. Therefore, the researcher located as many studies as possible to ensure that the 32 studies ultimately included in the study were a representative sample.

An important limitation in conducting an integrative review is the difficulty in allowing for the individual studies' methodological limitations (Jackson, 1980). Every attempt was made to determine if the different methodological limitations in each study were correlated with the results of the study. It is also necessary to note, however, that methodological limitations do not always affect the results of a study. Wherever the researcher judged the methodological limitations to have affected a study's results, an explanation to that effect was provided.

Another limitation of conducting integrative reviews is researcher bias. Using an integrative review methodology makes some researcher bias unavoidable. Part of conducting an good integrative review relies on the skill of the researcher. The reviewer conducting a research summary can potentially organize findings in a powerful way (Light & Pillemer, 1984). But the reviewer must organize the findings, thereby introducing the possibility of bias. Thorough documentation of

the methodology used to organize the findings allows readers to make their own judgements.

CHAPTER FOUR

Results

Introduction

The empirical research on the characteristics of dropouts needs to be analyzed and synthesized. The results of such a synthesis would yield a set of common characteristics of high school dropouts and combine the information known about the different characteristics of dropouts. The purpose of this study was to conduct an integrative review of ten years of research on the characteristics of dropouts. The final product is a significant addition to the current body of research.

As stated in Chapter Three, a group of eight studies were not included in this integrative review because they look only at the demographic factors of age, gender, and ethnicity of dropouts. Because they present empirical research that addresses characteristics of dropouts however, a table and narrative summary of their results is included separately from the synthesis of the 32 studies.

An overview of the integrated empirical research is presented in five tables. Following the overview, an analysis of selected characteristics and a narrative synthesis of the 32 studies is presented. At the end of the chapter, the research questions are addressed.

Summary of Demographic Dropout Studies

The studies included in this summary were collected during the data collection process and focus on the incidence of dropping out in a particular geographic area. This group of eight studies addresses ethnicity and gender with three of the eight also addressing age. These eight studies are longitudinal studies and provide valuable information on these three characteristics of dropouts. The studies were conducted in North Carolina, Illinois (2), Florida, New Mexico (2), Texas, and California. For the purpose of this integrative review, only the information from these eight studies on the overall dropout rate, ethnicity, gender, and age of dropouts is summarized. The percentages shown relate to the total number of students in that particular ethnic group or gender category (e.g. the number of Hispanic dropouts are figured in relation to Hispanic students attending school, not in relation to the total number of white dropouts).

Overall Dropout Rates

Table 1 shows the extreme variation in overall dropout rates among these eight studies. It is difficult to determine whether this variation is due to different methods used to measure the dropout rate, different definitions of the term "dropout", or actual differences in the number of dropouts in each of these areas.

Table 1

Summary of Studies Addressing Gender, Ethnicity, and Age

Study	Overall Dropout Rate (%)	Gender (%)		Ethnicity (%)				
		Male	Female	White	Black	Hisp.	Asian	Natv. Amer.
		(reported in percentage of total population)						
Arnold 1985	13.2	14.2	10.7	10.2	24.8	29.5	•••	15.2
Borgrink 1987	8 .0	•••	•••	6.4	7.8	9.0	4.1	12.0
Frazer 1990	11.2	13.8	11.5	11.5	11.7	15.7	10.0	25.6
Hess & Lauber 1985	43.0	49.0	36.0	35.0	45.0	47.0	19.0	•••
NCSDE 1985	26.0	29.9	20.9	24.0	26.6	•••	•••	50.8
Renfroe 1985	16.0	•••	•••	•••	•••	•••	•••	•••
Shainline 1987	19.6	21.3	17.9	16.3	22.9	23.8	12.9	29.3
Stephenson 1985	29.5	32.1	26.8	26.4	33.9	29.3	19.0	•••

Shainline (1987) conducted a four-year longitudinal study of 5,976 students in the Albuquerque Public Schools to determine whether cohort figures or annual dropout figures provide a more accurate indication of the school district's ability to maintain student enrollment in education programs. He found that 19.6% of the students dropped out over four years. Stephenson (1985) studied 19,000 students in Dade County, Florida over a four and a half year period. He found an overall dropout rate of 29.5%. Arnold (1985) conducted a descriptive analysis of the data from the HS& B Survey focusing on the specific information on dropouts from the state of Illinois. He compared this information on Illinois dropouts to that of the national sample. The dropout rate was 13.2% of the 1980 Illinois sophomore class between 1980 and 1982. The North Carolina State Department of Education (1985) conducted a study to determine the nature and magnitude of the dropout problem in the state. It found an overall dropout rate of 26%. Frazer (1990) conducted a six-year study for the Austin Independent School District on high school dropouts from 1983 through 1990. Findings from the 1989 data show an overall annual dropout rate of 11.2%. Borgrink (1987) conducted a study in the New Mexico Public Schools to determine the extent and nature of the school dropout problem. He found an overall dropout rate for the 1986-87 school year was 8.0% (total

students population was 81,058 with 6,495 of these students dropping out). Hess and Lauber (1985) conducted a longitudinal study of the Chicago Public School System tracking all entering students in the class of 1982 to determine the extent and nature of the dropout problem. The overall dropout rate for the class of 1982 was 43%. Renfroe, Pike, and Weisbender (1988) conducted a study to present information by ethnicity, gender, and age on students in the Los Angeles Unified School District who had graduated, dropped out, or transferred during the 1985-86 school year. The population studied included both high school dropouts and graduates. The overall dropout rate for the 1985-86 school year was 16%. The data from this study are broken down by junior high school and senior high school classes. The junior high school dropouts accounted for 39% of the dropouts, the senior high dropouts 54%, with the remaining 7% attending nonregular schools. The information below summarizes each studies' findings on gender, age, and ethnicity.

Gender

This group of studies suggests that a higher percentage of the total population of males drop out than of females. Arnold (1985) found that although over half of the dropouts were female, males were proportionately more likely to dropout than females (14.2% male vs. 10.7% female). Borgrink (1987)

also found that males dropped out of school proportionately more than females. Hess and Lauber (1985) found that nearly half of all males (49%) and one third of all females (36%) of the class of 1982 dropped out. Renfroe et al. (1988) found that among those in junior and senior high schools males had a higher dropout rate than females.

Ethnicity

In all of the studies the percentage of the total population of Hispanics who drop out and the percentage of the total population of blacks who drop out is higher than the percentage of the total population of whites who drop out. In every study that reported dropout rates for Native Americans except one, this group had the highest percentage of total population who drop out. Overall, these studies show high dropout rates for all minority groups with the exception of Asians.

Arnold (1985) found that the dropout rates from the sophomore to senior years for Hispanic and black students in Illinois were the highest among the five major ethnic groups. In Austin, Frazer (1990) found that the dropout rate for blacks was the highest in six years whereas the rates for whites and Hispanics was the lowest in six years. In New Mexico, Borgrink (1987) found that Native Americans and Hispanics consistently had higher dropout rates than the other groups. Renfroe et al.

(1988) broke their data into two sets, junior and senior high school students. Among junior high school students, 45% of all the Hispanic students, 33% of all the black students, and 16% of all the white students dropped out. Blacks and Hispanics represented the highest number of dropouts among junior high school students. Among senior high school students, 48% of all Hispanic students, 24% of all black students, and 21% of all white students dropped out.

Age

All the studies that addressed the relationship between age and dropping out suggest that being overage for a particular grade in high school significantly increases the chance of dropping out. Stephenson (1985) found that age has a strong relationship to dropout rate. More than one-half the cohort of dropouts had been retained one or more years. However he concluded that, although the dropout rate for those students who have been retained was high, almost half of the students who dropped out had progressed normally to the eighth grade. Hess and Lauber (1985) found that the older a student is when entering high school, the more likely he or she is to drop out. Sixteen-year-olds entering high school (two years overage) had a 69% dropout rate, while 15-year-olds (one year overage) had a 60% dropout rate. Overall, the authors found that a quarter of all students entering high

school are overage and overage students represent more than one third of all dropouts. Renfroe et al. (1988) found that more 17-year-olds dropped out than any other high school age group.

Summary

The results of the eight studies addressing the demographic factors of gender, ethnicity, and age show that males dropout out at a higher rate than females, blacks and Hispanics drop out at a higher rate than whites, and Asians drop out at a lower rate than any other ethnic group. In addition, students who are overage in high school have a significantly higher dropout rate than those who are not overage. It is important to compare and analyze these results with the information specifically on gender, ethnicity, and age from the 32 empirical studies described below.

Overview of Empirical Studies

To give the reader an idea of the diversity of the 32 empirical studies a table of their purpose statements is presented. All of the studies identify or examine characteristics of dropouts and the purpose of each study illustrates the variety of ways this is done. For example, one researcher constructed a prediction model to predict who is likely to dropout of school, one studied the relationship between substance abuse and failure to complete high school,

Table 2

Empirical Study and Purpose Statement

Study/Researchers	Purpose Statement
1. Austin Independent School District. (1982).	To explore the nature and extent of the dropout problem in Austin. To describe characteristics of dropouts and examine reasons for and consequences of dropping out.
2. Baca, C.C., Burchard, J., Broyles, S., & Berglund, C. (1989).	To identify a set of predictive dropout characteristics of females by racial/ethnic background and a set of intervention strategies to address those factors. To assess the accuracy of existing high-risk criteria for identifying potential female dropouts. To develop differential criteria specific to female and to develop identification criteria specifically for racial/ethnic groups and disabled young women.
3. Barro, S. M., & Kolstad, A. (1987).	To examine the influences of personal and family background attributes, economic and locational factors, school characteristics and educational experiences, and certain student behaviors and choices on the decision to leave high school before graduation.

(table continues)

(Table 2 continued)

4. Barrington, B.L., & Hendricks, B. (1989).	To look at the characteristics that differentiate prospective graduates from those who will not complete high school. To examine if they are measurable using data available from the students records. To examine how early in a student's career can students at risk of noncompletion be identified. To examine if the characteristics of students who will stay four years of high school and not graduate differ from those of dropouts and graduates?
5. Blackorby, J. Edgar, E., & Kotering, L.J. (1991).	To obtain information on the proportion of students identified as mildly handicapped who, during their school years, were identified as high school graduates, and similar students who interrupted their schooling and to determine the factors related to these outcomes.
6. Cairns, R.B., Cairns, B.D., & Neckerman, H.J. (1989).	To examine behavioral, cognitive, and demographic factors associated with early school dropout.
7. Camayd-Freixas, Y., &xHorst, L. (1986).	To study the dropout problem in Boston s Public Schools. To provide specific information to school officials in Boston on the drop out problem.

(table continues)

(Table 2 continued)

8. Curtis, J. (1983)	To construct a prediction model that aids in the identification of secondary students likely to drop out of school from readily available school information.
9. Ekstrom, R.B., Goertz, M. E., Pollack, J.M., & Rock, D.A. (1986).	To answer; who drops out?, why does one student drop out and not another?, what and happens to dropouts during the time that their peers remain in school?, and what is the impact of dropping out on gains in tested achievement?
10. Fernandez, R.M., Paulsen, R., & Hirano-Nakanishi, M. (1989).	To document the nature and extent of the dropout problem for Hispanics compared to non-Hispanic whites and blacks using data from the sophomore cohort of the High School and Beyond Survey. To examine the presumed causes for dropping out for Hispanic and non-Hispanic white and black youth. To develop models of dropping out for each group using family background, school performance, and other demographic variables and examine how successful these models are in explaining Hispanic and non-Hispanic differences in dropping out.

(table continues)

(Table 2 continued)

11. Gabriel, R.M., & Anderson, P.S. (1987).	To utilize information from a regional database to illustrate the prevalence of at-risk youth within and across six northwest states. The analyses are presented to a state-level decisionmakers in identifying the prevalence and distribution of students at-risk of dropping out of school.
12. Gastright, J.F., & Ahmed, Z. (1988, April).	To document the results of one local study of dropouts and to compare local dropout characteristics with results from national studies.
13. Helge, D. (1990).	To compare the incidence of various types of at-risk students in rural, urban, and suburban school districts. The study also examines incidences of at-risk students with disabilities. Incidences of various categories of at-risk students in pre-school, elementary, middle, and high school levels were compared.
14. Jay, E.D., & Padilla, C.L. (1987).	To determine; (a) to what extent is there a dropout problem for special education students and how does it compare with that of the total student population, (b) the relationship between various student characteristics and the likelihood of dropping out, and (c) the district characteristics related to dropout rates for special education students. (table continues)

(Table 2 Continued)

15. Jenifer, W.A. (1989).	To identify characteristics that most accurately describe ninth grade high school students who drop out from school. To verify the general list of dropout characteristics and to determine any characteristics that differed between ninth grade dropouts and those who stayed in school.
16. Kaeser, S.C., & Hooper, P.K. (1983).	To investigate the characteristics of seventh and eighth grade students who leave school and the reasons why they do so.
17. Martin, D.L. (1981).	To identify certain family, personal, and subjective characteristics that contribute to students dropping out of the Kentucky educational system and to predict which students will leave early.
18. Martinez, R. (1986).	To examine the reasons given by dropouts for having withdrawn from school, to examine the problems experienced in schools by dropouts prior to their withdrawal, and to provide recommendations for reducing the dropout problem among minority youth.
19. McCaul, E. (1988, April).	To determine what the High School and Beyond Survey data set reveals about the characteristics, attitudes, and school

(table continues)

(Table 2 continued)

	experiences of rural dropouts. To investigate the difference between rural dropouts and rural persisters relative to gender, grade, test scores, self-concept, locus of control, ratings on the importance of life values, and ratings of school conditions. To examine the difference between rural high school dropouts and their urban counterparts relative to life activities, reasons for dropping out, ratings of the importance of life values, and ratings of school conditions.
20. Mensch, B.S., & Kandel, D.B. (1988).	To study the relationship between substance abuse and failure to complete high school. To answer the following questions: Are the use of drugs and dropping out of school related to each other? Does drug use have a unique effect on and is it a predisposing factor for dropping out of school (controlling for individual attributes)? Do dropouts who eventually acquire an equivalency certificate have different histories of drug use than those with no high school diploma?
21. Pallas, A. M. (1984).	To consider social background variables and the perspectives of Academic Performance, Social Disability, and Accelerated Role Transitions as predictors of why youth drop out of high school.

(table continues)

(Table 2 continued)

	To develop models expressing dropout as a function of the three perspectives, background factors and school truancy, as well as background factor alone.
22. Peng, S.S., & Takai, R.T. (1983).	To provide descriptive information about dropout rates by various subgroups and the reasons for dropping out.
23. Poole, M.E., & Low, B.C. (1982).	To examine the major determinants of the & staying and leaving process for samples of male and female adolescents. To identify the combined contribution of home background, school experiences, and personal ability and attitudinal factors for female and male leavers and stayers, with a view towards determining whether the patterning of influences is the same or different for male and female adolescents.
24. Poulos, N. (1986).	To identify a dropout pattern or profile which could be used to more readily identify at risk youth in Detroit Public Schools. To get information from dropouts concerning personal background, family background, home environment, peer group and teacher relationships, reasons for leaving school and services which could have kept them in school or would encourage their reenrollment.

(table continues)

(Table 2 continued)

25. Rice, W.K., Toles, R. & E.M. (1988).	To continue an on-going series of Chicago Public Schools dropout studies with an Schulz, analysis of the high school entering class of 1982. To examine retention, in the form of overage entry to high school, as a predictor of dropout behavior.
26. Rumberger, R.W. (1983).	To examine the extent of high school dropout problem and investigate the reasons students leave school and the underlying factors influencing their decisions. To examine the role of race sex and family background in dropping out.
27. Rumberger, R.W., Ghatak, R., Poulos, G., Ritter, P.L., & Dornbisch, S.M. (1990).	To explore a series of variables that reveal some of the mechanisms by which families influence student's decisions to drop out of school. To contribute to the understanding of how families influence dropout behavior.
28. Stedman, J. B. (1988).	To investigate the role of background characteristics and in-school and out-of-school experiences on public high school dropout rates using data on the 1980 sophomore class from High School and Beyond Survey.

(table continues)

(Table 2 continued)

29. Valverde, S.A. (1987).	To provide a comparison of characteristics within various groups of Hispanic students who drop out of school be fore graduation and who complete high school, controlling as much as possible for obvious demographic variance.
30. Velez, W. (1989).	To estimate the effects of various factors on the odds of dropping out of high school among tenth-grade students of Chicano, Cuban, and Puerto Rican ethnic origin. Non-Hispanic whites were included for comparison purposes.
31. Wagner, M. (1991).	To provide information to practitioners, policymakers, researchers, and others regarding the transition of youth with disabilities from secondary school to early adulthood. To examine the dropout behavior of students with disabilities by comparing dropping out to school persistence and examining characteristics that distinguish students who chose those two paths.
32. Wilcynski, M. M. (1986).	To determine how selected characteristics that exist among elementary age children attending school in an urban Iowa school district can help predict those students who will leave school prior to high school graduation.

and another examined variables that show how families influence a student's decision to dropout. One of the advantages to combining research results is that all the primary research was collected in diverse ways.

Examining the methodologies of the 32 studies shows the primary ways data are collected on characteristics of dropouts. The different methods the researchers used to collect data fall into six categories. They are (a) examination of school records [used by ten studies], (b) interviews with dropouts and examination of school records [used by nine studies], (c) interviews with school personnel [used by two studies], (d) other methods [used by three studies], and (e) analyses of the database from the HS & B Survey [used by eight studies]. The other methods in category (d) were unique combinations. One study used results of a survey of special education districts and county offices in combination with site visits to selected offices and data from the state educational data system. Another study used results of a questionnaire and results from standardized tests administered to dropouts. The third study used information from school records, interviews with parents, and results of a survey of educators. The HS&B Survey's database results were obtained from a student-completed questionnaire, students' scores on a special battery of aptitude and achievement tests, and students' high school records. The

school records contained information on students' educational experiences that was not available from the questionnaires. This database was used by 8 of the 32 studies.

The nature of the subject, characteristics of dropouts, lends itself to descriptive statistical analyses. All of the 32 studies used descriptive techniques. Eight of the studies included analyses beyond descriptive procedures on information other than the characteristics of dropouts. Additional information on the methodologies of the 32 studies is included in Appendix A.

Table 3 provides additional information on each study (e.g., population, area of the country studied) and illustrates the issues raised in Chapter Two concerning the variety of definitions of dropout and ways to calculate dropout rates. Had each study used the same method to calculate dropout rates and the same definition of dropout, perhaps the results of the studies would be different. It is interesting to note that 4 of the 32 studies focused on low socioeconomic areas, and although the other studies were not conducted in low socioeconomic areas, the majority of them examined the specific socioeconomic level of dropouts as one of the factors related to dropping out. This table also shows a variance in the overall dropout rate that can be attributed to the methods used to measure the rate. Although the methods used to calculate

Table 1

Characteristics of Empirical Studies Included in Integrative Review

Study	Population	Dropout Definition	Community Type/ Area of U.S.	Method to Calculate Rates	Overall Dropout Rate
Austin Independent School District (1982)	dropouts	students who left AISD for whom no evidence could be found that they entered another school or school district where they could receive a h.s. diploma	urban/Austin	not stated	24%
Baca et al (1989)	dropouts & graduates, focusing on females	dropouts according to California State Department of Education	urban/San Diego	40%	not stated
Barro & Kolstad (1987)	dropouts	HSB1	National	HSB11	14%
Barrington & Hendricks (1989)	dropouts, graduates and non graduates	students who did not graduate by 1985, were not enrolled in school & had not transferred	urban & (small) rural/Wisconsin	the number of students remaining after determining grad., non grad., & transfers	not stated
Blackorby et al (1991)	special education dropouts & graduates	(1) were no longer enrolled in school; (2) had not formally transferred; (3) had not received a h.s. diploma	urban/Washington state	not stated	14% district rate
Cairns et al (1989)	dropouts & graduates	whether or not the subject dropped out prior to the completion of 11th grade of his cohort	suburban & rural	not stated	not determined
Carnoy & Fiennes & Horst (1986)	dropouts	over 16 & have been discharged as having dropped out	urban/Boston	not stated	11.8%
Curtis (1983)	dropouts	students who left AISD for whom no evidence could be found that they entered another school or school district where they could receive a diploma	urban/Austin	not stated	24%
Ekstrom et al (1986)	dropouts	HSB	National	HSB	14%

(table continues)

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(Table 1 continued)

Characteristics of Empirical Studies Included in Integrative Review

Study	Population	Dropout Definition	Community Type/ Area of U.S.	Method to Calculate Rates	Overall Dropout Rate
Fernandez et al (1989)	dropouts, focusing on Hispanics	HSB	National	HSB	14%
Gabriel & Anderson (1987)	at risk youth	number of persons who are 16-19 & who are neither attending school nor graduated	urban & rural - 6 northwestern states	not stated	13.4%
Goodlight & Ahmad (1988)	dropouts	those classified as "dropout" according to school records of Cincinnati schools	urban/Cincinnati	not stated	8.2%
Helge (1990)	rural at risk students	NA	National	NA	NA
Jay & Padilla (1987)	special education dropouts	students who left the district prior to graduation or the completion of a formal education or legal equivalent -- GED or CHSPE -- and did not, within 45 school days, enter a public or private educational institution or school program	urban & rural/California	not stated	24.9%
Jordan (1989)*	dropouts & graduates	someone who leaves school before graduation without transferring to another school	urban/Detroit	the number of students who drop out of school compared to the number of students who entered school during a certain year & who completed school	not stated
Kaiser & Hooper (1983)	7th & 8th grade dropouts	districts that characterized students as "dropouts"	urban & suburban/Ohio	not stated	not stated
Martin (1981)	dropouts and graduates	not stated	urban & rural/Kentucky	not stated	not stated
Martinez (1986)*	minority dropouts	students who withdrew or who were expelled from school prior to receiving their diploma & who are not known to be enrolled at a local high school	Pikes Peak region (Colo.)	not stated	not stated
McCord (1988)	rural dropouts	HSB	Rural/National	HSB	14%

(table continues)

(Table 5 continued)

Characteristics of Empirical Studies Included in Integrative Review

Study	Population	Dropout Definition	Community Type/ Area of U.S.	Method to Calculate Rates	Overall Dropout Rate
Mensch & Kandel (1988)	graduates, dropouts, and GED recipients	anyone who interrupted their high school education, including terminal dropouts, individuals who returned to school & obtained h.s. diploma & those who obtained a GED	National	not stated	22.3%
Fallis (1984)	dropouts	HSB	National	HSB	14%
Fong & Tabar (1983)	dropouts	HSB	National	HSB	14%
Poole & Low (1982)	dropouts	students who left school before age 17	not stated	not stated	not stated
Rankin (1986)	dropouts	dropouts according to Detroit public school records	urban/Detroit	not stated	not stated
Rice et al (1988)	average dropouts	dropouts according to the Chicago public school records	urban/Chicago	number of dropouts divided by number of graduates plus number of dropouts	41.4%
Rumberger (1983)	dropouts	not having completed 12 years of schooling, according to the NLS of Youth Labor Market Experience	National	not stated	not stated
Rumberger et al (1990)	dropouts	any student who has been enrolled in grade 10-12 but who left school prior to graduation or the completion of formal education (or legal equivalent) & who did not, within 45 days of school, enter another public or private institution	urban/San Francisco	not stated	not stated
Stelman (1988)	dropouts	HSB	National	HSB	14%
Valverde (1987)*	Hispanic high school dropouts	formally withdrew from school, or disappeared & showed no evidence of having transferred	urban/Houston	not stated	not stated
Velez (1989)	dropouts	did not leave school by transferring or graduating	urban	not stated	not stated

(table continues)

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(Table 5 continued)

Characteristics of Empirical Studies Included in Integrative Review

Study	Population	Dropout Definition	Community Type/ Area of U.S.	Method to Calculate Rates	Overall Dropout Rate
Wagner (1991)	dropouts with disabilities	students with disabilities who were coded as having dropped out according to their school records, including those who were expelled	National	not stated	43%
Wehlage (1986)	dropouts	did not leave school by transfer or graduation	urban	not stated	not stated

Notes:

*focused on low SES population

††SS Method to Calculate Rates: Percentage of students who temporarily or permanently stopped their schooling before graduation.

†††CB Dropout Definition: A person who was a high school sophomore in spring 1980 but who was neither enrolled in high school nor a high school graduate or the equivalent at the time of the follow up survey in spring 1982.

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the overall dropout rate is missing in some studies, it is clear from the results that this information varied among the studies. For example, the 3.1% figure in the Kaeser study reflects the overall dropout rate for seventh-and eighth-grade students, not high school students. A particularly disturbing number is the 41.4% dropout rate from the Rice, Toles, and Schulz study. This is the only overall dropout rate that is considerably higher that the others. It is also interesting to note that 14 studies did not provide the overall dropout rate and 20 studies did not provide the method used to calculate dropout rates. This makes it difficult for the reader to confirm the validity and accuracy of the dropout rates and numbers used in the study. A geographically wide range of cities are represented including Austin, San Diego, Boston, Chicago, Cincinnati, and San Fransisco. Both urban and rural areas are represented.

Eight of the 32 studies were based on the data from the HS & B Survey, one of the largest databases of information on dropouts. All eight focused on different variables of dropping out and provided information supplementing the empirical research base.

When examining the general nature of the studies, the differences that make each one unique become evident. Three of the 32 studies focus on the dropout problem among the

Hispanic population, with an additional study examining dropouts from all minority populations. Four of the studies concentrate on the characteristics of dropouts among the special education population. Two studies examine the characteristics of dropouts in rural areas.

Four studies examined just one variable and its effect on dropping out. One study focused solely on the effects of drug involvement and dropping out, one study explored gender differences, one explored grade retention, and one studied family influences on dropout behavior.

Table 4 provides a comprehensive list of all the characteristics examined in the 32 empirical research studies. The list shows all the characteristics addressed in the studies grouped by categories. According to Wolman et al. (1989) the factors related to characteristics of dropouts can be grouped into five categories; demographic factors (including social and family-related factors), school-related factors, personality factors, factors related to early transition into adulthood, and factors related to deviant behavior. Each of the characteristics addressed by the 32 studies fit into one of these categories.

Phelan (1986) presents another perspective. He proposes a heuristic model which delineates the causes and correlates of dropping out. Three major sets of variables are included: (a) individual background variables, (b) precipitators (sometimes

Table 4

Comprehensive List of Characteristics Included in Studies

Category	Characteristics/Factors
Demographic factors (Background)	* Age/grade * Gender * Ethnicity/LEP Status * Geographic region * Community type
Social & Family factors (Background)	* Parents' marital status * Parents' educational/ occupational level * Family support received * Socioeconomic status * Peer group influence * Family size * Sibling dropout status
Personality factors (Background)	* Self-concept * Motivation level/attitude
Early Transition to Adulthood (Precipitators)	* Pregnant * Children * Dating/marital status * Employment

(table continues)

(Table 4 continued)

Category	Characteristics/Factors
Deviant Behavior in Society (Precipitators)	* Discipline issues/suspension * Substance abuse
In-school factors (Precipitators)	* Grade retention * School grades/academic achievement * Achievement test scores * Extra-curricular participation * Absenteeism/tardiness * Special education status * Poor relationship with teachers

viewed as causes) that are usually symptomatic of deeper personal or school-related problems, and (c) in-school factors that may contribute to the ultimate dropout decision. Phelan's model is a useful way of organizing the characteristics into a bigger picture because all of the characteristics stated in the studies, as with the Wolman model, fit under one of these three main variables. Phelan asserts that the available research has not addressed all of the components in his model; however, this researcher found when the studies are combined, the results fit very well into his proposed model.

Table 5 shows the distribution of each study by the level on which it was conducted; local, state, or national. Local studies are conducted more often than state or national studies. It is much easier to conduct a local study within a single school district where only one method for calculating dropouts and one definition of a dropout is used than it is to conduct a statewide or national study where data must be combined that have been collected using a variety of methods and a variety of definitions of a dropout. It is also less costly to conduct a local study than a state or national study.

Analysis of Most Commonly Studied Factors Included in Empirical Studies

Table 6 presents an analysis of selected factors included in the empirical studies. This is a representation of the

Table 5

Studies By Level: Local, State and National

Level	Study/Author	Location
Local	* Austin Independent School District	Austin, TX
	* Baca, Burchard, Broyles, & Berglund	San Diego, CA
	* Barrington & Hendricks	Rural WI
	* Blackorby, Edgar, & Kotering	WA
	* Cairns, Cairns, & Neckerman	Not stated
	* Camayd-Freixas & Horst	Boston, MA
	* Curtis	Austin, TX
	* Gastright & Ahmad	Cincinnati, OH
	* Jenifer	Detroit, MI
	* Martin	Rural KY
	* Martinez	CO
	* Poole & Low	Not stated
	* Poulos	Detroit, MI
	* Rice, Toles, & Schulz	Chicago, IL
	* Rumberger (1990)	San Francisco, CA
	* Valverde	Houston, TX
	* Wilcynski	IA
State	* Jay & Padilla	CA
	* Kaeser & Hooper	OH

(table continues)

(Table 5 continued)

Level	Study/Author	Location
National	* Barro & Kolstad (HS & B Survey)	U.S.
	* Ekstrom, Goertz, Pollack, & Rock (HS & B Survey)	U.S.
	* Fernandez, Paulsen, & Hirano-Nakanish (HS & B Survey)	U.S.
	* Gabriel & Anderson (regional - six states)	U.S.
	* Helge	U.S.
	* McCaul (HS & B Survey)	U.S.
	* Mensch & Kandel	U.S.
	* Pallas (HS & B Survey)	U.S.
	* Peng & Takai (HS & B Survey)	U.S.
	* Rumberger (1983)	U.S.
	* Stedman (HS & B Survey)	U.S.
	* Velez (HS & B Survey)	U.S.
	* Wagner	U.S.

Note. HS & B Survey = High School & Beyond Survey

Table 6:
Analysis of Most Commonly Studied Factors Included in Empirical Studies

Investigators	Factors												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Austin	S	S	*	S	*	*	S	S	S	S	*	*	S
Baca	N	S	S	N	*	S	S	S	S	S	S	N	*
Barro	S	S	S	S	*	*	*	S	S	S	S	*	*
Barrington	N	*	N	*	*	*	S	*	*	S	S	*	*
Blackorby	N	S	*	*	*	*	*	S	*	*	*	*	*
Cairns	*	N	*	S	*	*	*	S	S	S	*	*	*
Camayd-Freixas	S	S	*	*	*	*	*	S	S	S	S	*	*
Curtis	S	S	*	*	*	*	S	S	S	S	*	*	*
Ekstrom	S	S	S	S	*	*	*	S	*	S	S	S	*
Fernandez	*	S	N	S	*	*	*	*	S	S	S	*	*
Gabriel	*	*	*	*	*	*	S	*	*	S	*	S	*
Gastright	*	S	S	*	S	S	S	S	S	*	*	*	*
Jay	*	*	*	N	*	*	S	*	*	S	*	S	S
Jenifer	S	*	S	S	*	*	S	S	*	N	N	*	*
Kaeser	S	*	*	*	*	S	S	S	S	*	*	*	*

Note: S = Significant N = Not significant * = Not Considered

Demographic Factors
- Factor 1 = Gender
- Factor 2 = Ethnicity

Social and Family Factors
- Factor 3 = Single Parent Family
- Factor 4 = Socio-Economic Status
- Factor 5 = Sibling Dropped Out

Early Transition to Adulthood
- Factor 6 = Pregnancy

In-school Factors
- Factor 7 = Absentism and Tardiness
- Factor 8 = Discipline
- Factor 9 = Grade Retention
- Factor 10 = Academic Performance
- Factor 11 = Achievement Test Scores
- Factor 12 = Extra Curricular Participation
- Factor 13 = Poor Relationship With Teachers

(Table continues)

(Table 6 Continued)

Investigators	Factors												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Martin	*	*	S	S	*	*	S	S	S	*	S	S	S
Martinez	*	*	*	S	S	*	S	S	*	N	*	*	S
McCaul	N	*	*	S	*	S	*	S	*	S	S	*	S
Mensch	*	S	S	*	*	S	*	S	*	*	*	*	*
Pallas	*	*	*	S	*	*	S	S	*	S	*	*	*
Peng	S	S	*	S	*	*	*	*	*	S	*	*	*
Poole	*	*	*	S	*	*	*	*	*	S	*	*	*
Poulos	*	S	S	*	S	S	*	*	*	S	*	*	N
Rice	S	N	*	*	*	*	*	*	S	*	S	*	*
Rumberger (1983)	*	N	*	S	*	S	*	*	*	*	*	*	*
Rumberger (1990)	N	*	*	*	*	*	S	S	S	S	*	*	*
Stedman	S	S	S	S	*	S	*	*	S	*	*	*	*
Valverde	*	*	*	*	S	*	*	*	*	S	*	S	*
Velez	S	*	S	S	*	*	S	S	*	S	*	*	*
Wagner	N	N	*	S	*	*	S	S	S	S	*	S	*
Wikynski	N	*	*	*	*	*	S	*	S	S	S	*	*

Note: S = Significant N = Not significant * = Not Considered

Demographic Factors
- Factor 1 = Gender
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- Factor 12 = Extra Curricular Participation
- Factor 13 = Poor Relationship With Teachers

findings from the statistical information presented in all of the studies except Helge (1990). The data from the Helge study were qualitative and could not be summarized in this type of table. The results from the Helge study, as well as additional qualitative results, are included in the narrative synthesis.

The most commonly studied factors are shown in the chart. If a study concluded that a characteristic was an important factor associated with the dropping out process, it is denoted by an S. If the study stated that a characteristic was not an important factor associated with the dropping out process, it is denoted by an N. If the study did not address a characteristic or did not reach a conclusion about its role in the dropping out process, it is denoted by an *. In addition to information about the significance of these selected factors, information on the distribution of each of these studies by level (national, state, or local) is provided below in the analysis of the table.

Factor 1

Gender is addressed by 18 of the 31 studies and found to be an important factor in the dropping out process by 11 studies and not important by 7. All of the studies that found gender an important factor associated with the dropping out process stated that dropouts were more likely to be males than females. Among these studies five are local, five are national,

findings from the statistical information presented in all of the studies except Helge (1990). The data from the Helge study were qualitative and could not be summarized in this type of table. The results from the Helge study, as well as additional qualitative results, are included in the narrative synthesis.

The most commonly studied factors are shown in the chart. If a study concluded that a characteristic was an important factor associated with the dropping out process, it is denoted by an S. If the study stated that a characteristic was not an important factor associated with the dropping out process, it is denoted by an N. If the study did not address a characteristic or did not reach a conclusion about its role in the dropping out process, it is denoted by an *. In addition to information about the significance of these selected factors, information on the distribution of each of these studies by level (national, state, or local) is provided below in the analysis of the table.

Factor 1

Gender is addressed by 18 of the 31 studies and found to be an important factor in the dropping out process by 11 studies and not important by 7. All of the studies that found gender an important factor associated with the dropping out process stated that dropouts were more likely to be males than females. Among these studies five are local, five are national,

and one is statewide indicating that the finding of males dropping out more than females is widespread not a reflection of specific localities. Of the studies that found gender not an important factor associated with the dropping out process, five are local and two are national. These studies predominantly found that males and females dropped out at an equal rate relative to the total proportion of these populations in the school. Although the number of male dropouts may have been more than the number of female dropouts, there were more males in the total population than females so proportionately the dropout rate showed that there was an equal chance of males and females dropping out. Overall, in pure numbers, these studies reflect a larger number of male dropouts than females, as do the studies that addressed only gender, age, and ethnicity. In addition, the majority of these studies, including all of the studies focusing only on gender, age, and ethnicity, show that males drop out at a proportionately higher rate than females.

Factor 2

Ethnicity is addressed by a total of 17 studies. It was shown to be an important factor in the dropping out process by 13 of the 17 studies and not to be an important factor by 4. Of these four, two are local and two are national. Of the 13, 7 are local and 6 are national. All except one found blacks and

Hispanics more likely to dropout. This supports the same findings of the research addressing gender, ethnicity, and age stated in the beginning of chapter Four in the section entitled 'Summary of Demographic Dropout Studies'. One local study in Cincinnati found whites more likely to dropout. The research suggests that ethnicity is an important factor in the dropping out process.

Factor 3

Coming from a single-parent family is considered by 12 studies. Of the 12, 10 found coming from a single-parent family to be an important factor associated with the dropping out process and two found it not to be an important factor. Of the studies that found this important, five are local studies and five are national. Of the two that found coming from a single-parent family not important, one is local and one is national. The national study found that coming from a single-parent family was not a factor for minority students. This could mean that just as many graduates came from single-parent homes as dropouts but the study does not offer any explanation. In examining the local study, there is no explanation for this specific result. The majority of the studies that considered it found that coming from a single-parent family an important factor associated with the dropping out process.

Factor 4

Socioeconomic status is considered by 18 studies and found to be an important factor in the dropping out process by 16 and not to be an important factor by 2 studies. Of these two studies, one is a local study and one is a state study. Among the 16 that found socioeconomic status an important characteristic, 10 are national and 6 are local. It should be noted that of the 10 national studies, 8 used the same database from the HS & B Survey. The majority of research that addresses socioeconomic status suggest that it is an important factor associated with the dropping out process.

Factor 5

Having a sibling who dropped out is considered by four studies and found to be an important factor by all four. All four of the studies that addressed this characteristic are local studies. Since the research up to this point has been conducted on only a local level, it is difficult to make generalizations about the relationship between having a sibling who dropped out and dropping out. More research needs to be done, particularly on the state and national levels, before a definite conclusion can be reached.

Factor 6

Pregnancy, is considered by eight studies and found to be an important factor in the dropping out process by all eight

studies. Of the eight studies, three are local, one is state, and four are national (four of the national studies used the HS & B Survey database). Pregnancy is considered, by the majority of the studies that addressed it, an important factor associated with the dropping out process.

Factor 7

Absenteeism and tardiness, is addressed by 16 studies and found to be an important factor associated with the dropping out process by all 16. Of the 16, 10 are local studies, 4 are national, and 2 are statewide studies. The research suggests that absenteeism and tardiness is considered an important factor associated with the dropping out process.

Factor 8

Discipline, means involvement in discipline incidents in school or number of times referred for disciplinary action. This is addressed by 19 studies and found an important factor by all 19. Eleven of the studies are national, two are local and one is a statewide study. The research suggests that discipline, like absenteeism, is considered an important factor in the dropping out process.

Factor 9

Grade retention, is addressed by 15 of the studies. All 15 studies found that a student being retained was an important factor associated with the dropping out process. Of the 15

studies, 10 are local, 4 are national, and 1 is statewide. In addition, the studies unanimously agreed that the higher the number of times a student was retained, the more likely he or she was to drop out of high school. These findings support the research on gender, ethnicity and age presented in the beginning of Chapter Four in the section 'Summary of Other Demographic Studies' which suggests a relationship between being overage in high school and dropping out.

Factor 10

Academic performance is addressed by 23 studies and found an important factor in the dropping out process by 21. Of the 21, 12 are local, 1 is state, and 10 are national, including all 7 studies using the HS & B Survey database. The two studies that found academic performance not an important factor in the dropping out process are local studies. In general, academic performance is measured by the grade point average of the student found in their school records. One of the local studies that found academic performance not an important factor associated with the dropping out process measured academic performance by the subject's self-reported average grades. This method of measurement could explain why academic performance was not found to be significant. In the past, self-reported grades have proven to be less accurate than grades taken from a student's transcript. Overall, the research

suggests that academic performance is a considered an important factor in the dropping out process.

Factor 11

Achievement test scores, are considered by 11 studies and found an important factor by 10. Of the 10, 4 are national studies and 6 are local studies. The one study that found achievement test scores not an important factor is local. This study is the same study that found academic performance not to be an important factor associated with the dropping out process. The author, however, does not provide any explanation for these results.

Factor 12

Lack of participation in extracurricular activities, was considered by seven studies. Six found it to be an important factor in the dropping out process and one local study found it not to be an important factor. Of the six, three are national, two are local, and one is state. The one study that found this not important reported that extra-curricular participation for both dropouts and graduates was very low. Although there is not a significant amount of empirical research addressing this factor, lack of participation in extracurricular activities appears to be an important factor associated with the dropping out process.

Factor 13

A poor relationship with teachers was addressed by six studies and found to be an important factor in the dropping out process by five. It was not considered an important factor by one local study. Of the five, four are local studies and one is national. The one local study reported that the majority of the dropouts in the study had "so-so" relationships with teachers. The study also reported that, even with the dropouts that had poor relationships with teachers, this was not an influential factor in their decision to leave. The majority of the studies that considered a poor relationship with teachers suggest that it is a contributing factor to the dropping out process. This is another factor on which additional research needs to be conducted. Based on the results available, however, having a poor relationship with teachers appears to contribute to the dropping out process.

Table 6 reflects the conclusions from the empirical studies based on the statistical results and on whether the study stated a factor did or did not contribute to the dropping out process. The factors included in the table are those most commonly mentioned. Other factors that were not included in this chart but were considered by selected studies are addressed in the narrative section. Based only on this information, socioeconomic status, ethnicity, single-parent

family, absenteeism, involvement in discipline incidents, grade retention, academic performance, and test scores are considered by the 31 empirical studies to be associated with the dropping out process. Additional information from the results of these empirical studies is given in the narrative synthesis.

Narrative Synthesis By Characteristic

Table 4 provides a comprehensive way of organizing the characteristics of dropouts for a narrative synthesis. The relevant data on dropout characteristics from each of the 32 studies is described in this synthesis. In addition to addressing characteristics of dropouts, the studies also reached some interesting conclusions that do not fall under any one particular characteristic. These results are included in the "related findings" section, along with findings about returning to school after dropping out and dropouts obtaining a Graduate Equivalency Diploma (GED).

Introduction to Narrative Synthesis

The results of these studies provide illuminating information, particularly when combined and synthesized by characteristic. Four of the 32 studies addressed the notion that based on a list of characteristics, one can predict who will drop out of school and who will stay. In Curtis' study (1983) of Austin, Texas dropouts, he found that 70% of the dropouts

could be successfully identified from a prediction model using information available in school district computer files. This information included the student's gender, ethnicity, grade point average, grade placement, and number of serious discipline problems. Barrington and Hendricks (1989) conducted a study comparing dropouts, graduates, and nongraduates and found that dropouts could be identified with 85% accuracy by ninth grade. Rumberger (1983) found that it is much easier to predict dropout behavior from specific factors than to identify what really motivates a student to leave school. In contrast, Wilcynski (1986) concluded in her local Iowa study that the ability to predict whether elementary-age students would become high school dropouts or graduates based on a set of criteria is limited. Her study, however, attempted to predict who would dropout based on a predetermined cluster of specific variables. The study found that certain individual variables at the elementary grade level such as academic performance, absenteeism, grade retention, and test scores were predictive of high school dropouts. Although there is not unanimous agreement on the ability to predict who will drop out, it is clear that with more information available about specific characteristics of dropouts, school personnel can better design programs to keep students in school.

Demographic Factors (Background)

The characteristics that are included in the category of demographic factors are age/grade, gender, ethnicity/LEP status, geographic region, and community type.

Age/grade. Because studies look at the age of the dropout in different ways, it is difficult to draw conclusions based on the information included in the research. Gastright and Ahmad (1988) found, in their study of Cincinnati dropouts, that the average dropout was slightly over 18 when he or she left school. Martinez (1986), however, found that the largest proportion of minority dropouts in the Pikes Peak region of Colorado left school at age 17. The Austin Independent School District (1982) found that one third of the students dropping out of Austin Public School did so before the legal age of 16. A conclusion that can be drawn, based on the the research that addresses age, is that an overage student in high school has an increased chance of dropping out.

Students do not appear to leave school during one particular grade. When looking at the grade of students when dropping out, Camayd-Freixas and Horst (1986) found that the largest share of dropouts in Boston were in 9th and 10th grades. Gastright and Ahmad (1988) and Poulos (1986) both support Camayd-Freixas and Horst's findings that the majority of dropouts left school in 9th and 10th grades. The HS & B

Survey shows that 30% of the dropouts left school before the end of 10th grade, 44% during or before the end of 11th grade, and 26% during 12th grade (Ekstrom, Goertz, Pollak, & Rock,1986). The two studies that do not agree are Wilcynski (1986) which found that the greatest percentage of students dropped out in 11th grade, and the Austin Independent School District (1982) which found the year with the greatest number of dropouts was the one that would have been the dropouts' senior year. Like the research on age, the research on grade is inconclusive.

Gender. The empirical research that addresses gender usually is inconclusive. The Austin Independent School District (1982) study found that Hispanic women were more likely to drop out than Hispanic men (39% vs. 32%), however, among blacks and whites, men were more likely to drop out than women (25% vs. 22% for blacks and 17% vs. 14% for whites). There was no further statistical analyses beyond percentages in the study to determine if these findings were considered significant, however, a trend appears toward males dropping out at a slightly higher rate than females. Although males had a higher dropout rate than females, overall, females were more likely to dropout than males of the same ethnicity, grade, and achievement level. Velez (1989) found that being female increased the chances of dropping out for Chicano and Puerto

Rican students. Camayd-Freixas and Horst (1986) found that in Boston the dropout rate of males was consistently higher than that of females (1.5 males to 1 female). Curtis (1983) found that males had a slightly higher dropout rate than females. Baca, Burchard, Broyles, & Berglund (1989) found that males and females drop out at approximately the same rate. Combining this information with the data in Table 6, it is impossible to reach any definite conclusions on the relationship between gender and dropping out.

Complicating the picture further, research shows that males and females are influenced by different factors to varying degrees. Among the 32 studies, there are two studies that examine dropouts and sex differences and dropouts. Baca et al. (1989) found that the number of siblings and the mother's educational level were factors that had a greater effect on females than on males. She also found that some factors, such as socioeconomic status, ethnic background, and level of parent education, affected males and females equally. Poole and Low (1982) examined sex differences among dropouts and graduates and found that males and females could be differentiated by a number of factors. Female dropouts achieved good grades and tended to be more conforming and influenced by teachers. Male dropouts were more extroverted and self-interested, showed low academic

performance, were not influenced by their teachers, and were less conventional and conforming in their attitudes toward school. They also found that females consistently rated their chances of success lower than males.

Ethnicity/limited English proficiency status. Much empirical research exists on the relationship between ethnicity and dropping out. Of the 32 studies, 3 focus on the dropout problem among Hispanic students and 1 on minorities in general. Camayd-Freixas and Horst (1986) found that the dropout rates for blacks and whites are closely proportional to the student enrollments in those groups. Over time, Hispanics were found to have the highest dropout rate and Asians the lowest. Cairns, Cairns, and Neckerman (1989) found in their study, that blacks do not show a higher dropout rate than whites. Blackorby, Edgar, and Kotering (1991) found that there are a disproportionate number of black students who are mildly disabled that leave school before graduating.

Fernandez, Paulsen, and Hirano-Nakanish (1989) conducted a study using HS & B Survey data that compared the dropout problem among Hispanic students with that among whites and blacks. They found that the dropout rate for Hispanics is 1.5 times that of whites, and 1.1 times that of blacks. They concluded, however, that interethnic differentials in dropping out are less severe than had been believed.

> It appears that there are similar patterns of effects of the independent variables on dropping out for Hispanics, whites, and blacks when gender is controlled - the specific factors investigated (scholastic achievement, SES, demographic characteristics, language factors, and native country) do not appear to affect dropping out among Hispanic youth. (p. 40)

In his study of dropouts in Austin public schools, Curtis (1983) also concluded that, independent of academic accomplishment, no ethnic-specific characteristics of black and Hispanic students seem to increase the dropout rate.

Other findings support those of both Fernandez et al. and Curtis. Martinez (1986) studied the dropout problem among minority students, comparing them with a dominant group, and concluded that the two groups (minority and dominant) do not differ significantly in ways that would seem to cause higher dropout rates among minorities. He did find, however, that more minorities reported they were encouraged by a school officials to drop out of school (46% vs. 36% of the dominant group members). Pallas (1984) studied the effect of accelerated role transitions such as pregnancy or marriage on dropping out and found no evidence that these transitions were less disruptive for minority students than for whites. He also

found when SES and ability were controlled, blacks and Hispanics dropped out of high school less frequently than whites.

The majority of studies that address ethnicity suggest that it relates to the dropping out process. Because of the variety of directions each study takes within this particular characteristic, it is impossible to draw any other definite conclusions.

One researcher did reach a conclusion concerning the effect of limited English proficiency on the dropout rates in her study. Valverde (1987) compared Hispanic graduates and dropouts in one high school and found that Limited English Proficiency status did not effect the dropout rates.

Geographic region. Only the national and regional studies addressed the factor of geographic region. Out of the 32 studies, only 2 of the national studies and 1 regional study made statements addressing geographic region. According to Barro and Kolstad (1987), who analyzed results from the HS & B Survey, dropout rates were higher in the South and West than in northeastern and north central regions. Ekstrom et al. (1986), who examined the same database as Barro and Kolstad, concluded that two of the background factors associated with dropping out were living in the South or a large city. Gabriel and Anderson (1987), who studied data from the U.S. Census

and Common Core of Data from the NCES in addition to collecting dropout statistics from the northwest region of the United States, found that there is extreme variability in patterns of dropouts both within and across the northwest states. Based on this limited research, it is impossible to draw any definite conclusions regarding geographic region and dropping out.

Community type. Only 4 of the 32 studies addressed the factor of community type. Peng and Takai (1983) and Barro and Kolstad (1987) found that, of the dropouts they studied, 18.9% came from urban communities, 11.8% from suburban, and 12.8% from rural. McCaul (1988) examined the same data from the HS & B Survey specifically to compare urban and rural dropouts. He found that urban dropouts were more likely to be black or Hispanic and rural dropouts were more likely to be American Indian or white. McCaul's findings reflect the distribution of these ethnic groups in rural and urban areas of the United States. These studies agree that more dropouts come from urban areas than suburban or rural.

Helge (1990) conducted a study comparing the incidence of various types of at-risk students in rural, urban, and suburban school districts by surveying school administrators. She found that rural schools estimated higher percentages of students, both disabled and non-disabled, in all of the at-risk

categories (i.e., migrant, poverty, minority, delinquency, substance abuse, low self-esteem, child of an alcoholic, sexually active/pregnant, and students with disabilities). Her analysis of the survey results suggest that, although overall numbers of dropouts might not be as large in rural areas as urban areas, social and economic strains facing rural students are at least as difficult as those facing inner city students. Based on the research addressing this factor, there are more urban students than rural students who drop out.

The category of demographic factors was found to be a major category that identifies characteristics of dropouts. The research shows the demographic characteristic most common to dropouts is ethnic status.

Social & Family Factors (Background)

The characteristics that are included in the social and family factors category are parent's marital status, parent's educational/occupational level, family support received, socioeconomic status, peer group influence, family size, and sibling dropout status.

Parent's marital status. The research suggests that more dropouts come from single-parent families than families with two parents at home. Stedman (1988) used the data from the HS & B Survey to focus on high school completion rates for (a) students from single-parent families, (b) students from poor

families, and (c) students who form families while still in secondary school. He concluded that students from single-parent families left school more than one and a half times as frequently as students from two-parent families. Velez (1989) concurs with Stedman, having found in his study that two parents at home significantly decreased the odds of Cuban and Puerto Rican students dropping out. In addition, these findings support the information in Table 6 which shows that 9 of 12 studies conclude that coming from a single-parent family is a factor contributing to the dropping out process.

Barrington and Hendricks (1989), however, found that more than two thirds of the 51 dropouts in their study were living with two parents at the beginning of ninth grade causing the authors to question the assumption that the typical dropout is from a broken home. The majority of research that addresses this factor suggests that coming from a single-parent family is associated with the dropping out process.

Parents' education/occupational level. A significant number of studies addressed the relationship between parents' educational level and dropping out. Barro and Kolstad (1987), examined the HS & B Survey data and found that their parent's education level is significantly different between dropouts and graduates. Gabriel and Anderson (1987) examined the dropout rates among the 16 to 19-year-olds in the northwest states and

found that parents' educational background contributes to the student's likelihood of completing their education. They also found that the dropout rate is directly related to the educational attainment of the adults in the community. Rumberger (1983) examined data from the National Longitudinal Survey of Youth Labor Market Experience and found that young women were more influenced by their mother's education level, whereas young men were more influenced by their father's education level. He concluded that overall, parent's educational level is a contributing factor to dropping out. Gastright and Ahmad (1988) found that over half the dropouts he studied in Cincinnati had parents who were dropouts and that parents' educational level is an important factor in dropping out. Poulos (1986) found that there were no high school graduates in the immediate families of 20% of the dropouts at the time they left school. Martin (1981) found that educational level of the dropouts' parents is lower than the educational level of the graduates' parents.

Two other studies disagree with the findings stated above. Mensch and Kandel (1988) and Valverde (1987) both found that parents' educational level is not an important factor associated with the dropping out process. Evidence shows that parent's educational level is linked to the educational attainment of their children.

Less information is included in the empirical research on the relationship between parents' occupational status and dropping out than on the level of education. Jenifer (1989) used parents' employment status as a measure of socioeconomic status and found this indicator significant in determining who drops out. He found that twice as many graduates have parents who are employed than do dropouts. Poulos (1986) found that in one third of the households of dropouts, no family member was employed. Although there may be a relationship between parents' occupational status and dropping out, there is not enough information in these studies to draw definite conclusions.

Family support received. Family support received is the amount support in the form of encouragement and assistance the student receives from their family related to their education. This can include help with homework, encouragement to remain in school, emphasizing the importance of education, and other types of support. It is difficult to analyze this factor because each study measures family support differently. In examining the empirical research, the amount of family support received is related to dropping out of high school. Ekstrom et al. (1986) found that dropouts have a weaker educational support system, particularly in the home, than graduates. Jay and Padilla

(1990) found that family support is a significant correlate to dropping out among special education populations. The Austin Independent School District (1982) found the less family support a student received, the greater the risk of her or him dropping out.

Rumberger conducted two studies on dropouts, both of which yield important conclusions about family involvement and dropping out. One study (1983) focused on the influence of race, sex, and family background on dropping out of high school. The results support the other findings that show family background a powerful predictor of dropout behavior. In 1990, Rumberger, Ghatak, Poulos, Ritter, and Dornbisch conducted another study focusing on the family influences on dropout behavior in one California high school. They found, in this later study, that dropouts were more likely than all other groups of students to live in households characterized by permissive parenting style (as measured by three indexes of parenting style [authoritarian, permissive, and authoritative] constructed by the authors of the study) and, as a consequence, were more likely to make decisions about proper behavior and activities on their own. They also found that parents of dropouts were more likely than the parents of graduates to use negative sanctions and emotions in reaction to their child's

academic performance. The parents of dropouts also reported that they were less engaged in their child's schooling.

The research that addresses the amount of family support received suggests that it is related to the dropping out process. The more family support received, the less likely the student is to leave school before graduation. Only one study of those that addressed the factor of family support and found contrary results. Baca et al. (1989) found no significant difference in the family support they received by dropouts and graduates.

Socioeconomic (SES) status. Socioeconomic status is a difficult factor to compare because the methods of measuring it vary among studies. The role socioeconomic status plays in the dropout picture is not unanimously agreed upon, although the majority of studies do agree that coming from a low SES background is associated with the dropping out process. Poole and Low (1982), Rumberger (1983), and Stedman (1988) found that dropouts came from lower socioeconomic backgrounds than graduates. Velez (1989) found, in his study of minority dropouts, that coming from a low socioeconomic background significantly increases the chances of Cuban students dropping out. These studies support the information from Table 6 showing that 16 of 18 studies found socioeconomic level is associated with the dropping out process.

However, the results of some studies disagreed with the majority. Fernandez et al. (1989) found that socioeconomic status was not a major factor in dropping out among Hispanics and blacks but was among whites. Jay and Padilla (1990) found that among special education students, socioeconomic level was not a significant correlate of dropping out. They conclude the SES status effects special education students less than students who are not in special education. Dropout rates for students with disabilities, they assert, were more closely related to students' academic performance and achievement level.

Peer group influence. Peer group influence is another factor that is measured differently among studies, making comparisons difficult. Poulos (1986) and Baca et al. (1989) found that peer group influence is a factor in a student's decision to leave school. One half of the dropouts that Poulos studied had at least one close friend who dropped out, and one third had two friends who had dropped out. In addition, Ekstrom et al. (1986) found that dropouts tend to chose friends who are alienated from school. Valverde (1987) studied 52 dropouts and 52 graduates and concluded that peer group influence is a contributing factor to the dropping out process. She found that the dropouts in her study had fewer friends than the graduates. Some graduates stated that they stayed in

school because of their friends. Based on the results of interviews with 52 dropouts and 52 graduates, Valverde's study concludes that peer group influence is a stronger determining factor in the student's decision to drop out or remain in school than any other factor, with the exception of academic grades. The studies that address the effect of peer group influence on the dropping out process all agree that it is a contributing factor. Not enough research has been conducted on this factor to make it a definite characteristic of dropouts.

Family size. Only 3 of the 32 studies addressed the relationship between family size and dropping out. Jenifer (1989) and Martin (1981) and Ekstrom et al. (1986) found that family size was an important factor in dropping out. Martin (1981) studied over 500 dropouts in Kentucky and concluded that dropouts came from larger families than persisters. This is another area, however, where the limited amount of research makes it impossible to draw generalizable conclusions.

Sibling dropout status. Valverde (1987) found that the dropouts in her study reported having more siblings who dropped out than did graduates. This supports the information from Table 6 showing that the four studies addressing sibling dropout status found it to be associated with the dropping out process. Although this is a factor that is not widely studied, the research that has been done is in agreement.

The social and family factors category was found to be a major category that identifies characteristics of dropouts. The common characteristics of dropouts in this category are SES status and coming from a single-parent family.

Personality Factors (Background)

The characteristics that are included in the personality factors category are self-concept/confidence level and motivation level/attitude.

Self-concept/confidence level. It is difficult to determine the significance of this factor because of the varying definitions of self-concept and the difficulty in measuring self-concept or confidence level. Therefore, it is impossible to draw sound conclusions as to whether it is an important factor associated with the dropping out process or not. It is still important, however, to consider the information that is included in the empirical research.

Ekstrom et al. (1986) using the HS&B Survey questionnaire's scales to measure self-esteem found that, overall, dropouts have a lower self-concept than graduates. McCaul (1988) studied the same data using the same scales to measure self-esteem from the HS & B Survey but focused on urban and rural dropouts and found that rural dropouts have lower self-esteem than urban dropouts. Baca et al. (1989) found graduates have higher levels of confidence than

dropouts. Poole and Low (1982) found confidence level, as measured by The Coopersmith Self-Esteem Inventory, was a factor for girls but not for boys. Mensch and Kandel (1988) found that confidence level is not an important factor in dropping out. Based on the five studies that address this factor, the research shows that dropouts usually have a lower self-concept than graduates.

Motivation level/attitude. This is a broad factor addressing motivation toward academic work, school in general, or attitude about leaving school and is measured differently from study to study. This makes comparison between studies difficult. Ekstrom et al. (1986), using the HS&B Survey's scales to measure general role attitudes, found that graduates' attitudes about school differ significantly from those of dropouts. The graduates were interested in school, liked to work hard, and were generally pleased with their education. They believed they would go on to complete two to four years of college whereas the dropouts saw themselves eventually finishing high school and taking some junior college classes. Poole and Low (1982), using The Aberdeen Academic Motivation Inventory, supported these results finding that students who became early school leavers are not as academically motivated as graduates.

No definite conclusions can be drawn about attitude or motivation as a factor associated with the dropping out process because there is not enough data available in the empirical research and the data that is available address motivation from a variety of perspectives and using a variety of methods.

The category of personality factors was not found to be a major category that identifies characteristics of dropouts.

Early Transition to Adulthood (Precipitators)

The characteristics included in the early transition to adulthood category are pregnancy, children, dating/marital status, and employment.

Pregnancy. Pregnancy can be classified as either a reason for dropping out or a characteristic of a female dropout. The information stated in Table 6 and described here is taken from studies that addressed pregnancy as a characteristic of dropouts rather than a reason for dropping out. Mensch and Kandel (1988) found that among females, early intercourse and pregnancy were very highly related to dropping out. Their findings support the information in Table 6 showing that pregnancy is associated with the dropping out process. Although in agreement, the information on pregnancy in this body of research is not enough conclude that it is associated with the dropping out process.

Children. All of the research that addressed the relationship between having children and dropping out suggests that it is associated with the dropping out process. Barro and Kolstad (1987), Martin (1981), and Stedman (1988) found that a student having children was an important factor associated with the dropping out process. In Stedman's study, those who became parents failed to graduate on schedule over four times as often as those who did not become parents. Pallas (1984) found that adolescent parenthood had negative consequences for the educational prospects of females but not males. Like pregnancy, however, there is not enough research available to draw definite conclusions about the relationship between having children and dropping out.

Dating/marital status. Marriage is more often addressed in empirical research as a reason for dropping out than as a characteristic of dropouts. One of the 32 studies did, however, address marriage as a characteristic. Stedman (1988) used the data from the HS & B Survey to focus on high school completion rates for (a) students from single-parent families, (b) students from poor families, and (c) students who form families while still in secondary school. He concluded that those students who married while still in school were more than five times as likely to dropout as those who did not marry.

Dating is another factor not usually addressed as a characteristic of dropouts, but, two studies addressed dating behavior as a characteristic. Both Velez (1989) and Pallas (1984) found dating behavior to be a predictor of dropping out. Velez used the data from the HS & B Survey to examine the effects of various factors on the odds of dropping out of high school among 10th-grade Chicano, Cuban, and Puerto Rican students. He found that students who are heavily involved with members of the opposite sex have higher odds of dropping out. Little empirical research has focused on the relationship between dating and marriage as a characteristic of dropouts. The evidence that is available shows the higher the level of involvement with the opposite sex the higher the chances of dropping out.

Employment. Although employment, like marriage, is usually addressed in empirical studies as a reason for dropping out, some of the studies address it as a factor associated with the dropping out process. Barro and Kolstad (1987), Gastright and Ahmad (1988), Jay and Padilla (1990), and Martin (1981) all found that employment is an important factor associated with the dropping out process. Fernandez et al. (1986) studied the dropout problem among Hispanic students using data from the HS & B Survey and found that Hispanic students from larger families are more likely to drop out of school and work

in order to help support their family. Pallas (1984) found that early work experiences increase the probability of young men dropping out of school but have no effect on young women. Martinez (1986), however, found that employment is not an important factor associated with the dropping out process. Although agreement is not unanimous, the research points to employment as a factor in dropping out. Definite conclusions cannot be drawn about the relationship between employment and dropping out because the body of research is too small.

The category of early transition to adulthood was not considered a major category that identifies characteristics of dropouts.

Deviant Behavior in Society (Precipitators)

The characteristics that are included in the category of deviant behavior in society are discipline issues/suspension and substance abuse.

Discipline issues/suspension. The empirical research addressed discipline issues in a number of ways, including suspension from school, cutting classes, expulsion, referral because of behavior problems, and delinquent and aggressive behavior. Curtis (1983), Jenifer (1989), and Rumberger et al. (1990) found that dropouts have significantly higher numbers of discipline incidents than graduates. Cairns et al. (1989) found that dropouts are characterized by high levels of

aggressive behavior. Kaeser and Hooper (1983), in their study of seventh-and eighth-grade dropouts in Ohio, found that some districts count students expelled from school because of misbehavior or truancy as dropouts. This category accounts for the second largest share of dropouts in their study. Ekstrom et al. (1986) found that in addition to behavior problems, dropouts are characterized by cutting classes, school suspension, and are more likely to be in serious trouble with the law than graduates. The authors concluded that behavior problems and the extent of these problems are a critical variable to dropping out. Velez (1989) studied national data to examine the effects of different factors on dropout behavior of Chicano, Cuban, and Puerto Rican students. He found that when the number of suspensions increases the odds of all three groups dropping out increases. However, cutting classes only increases the odds of dropping out for Chicano and Puerto Rican students.

The findings from Table 6 along with these findings show overwhelming evidence that involvement in discipline issues is directly related to students' dropout behavior.

Substance abuse. Although substance abuse is not frequently investigated specifically as a characteristic of dropouts, it was addressed in some of the studies included in this review. Jay and Padilla (1990) and Martinez (1986) found

that substance abuse is an important factor in dropping out among special education students and minority students, respectively. Baca et al. (1989) found, in their study of female dropout characteristics, that alcohol and drugs are used by a similar number of dropouts and graduates. However, when combined with school discipline problems and poor academic performance, their use becomes associated with the dropping out process.

One study specifically focused on substance abuse. Mensch and Kandel (1988) examined that data from the National Longitudinal Survey of Youth (involving over 12,000 young people ages 14 - 21) in order to investigate the relationship between dropping out of high school and drug involvement. They concluded that high school dropouts are more involved with cigarettes and illicit drugs than graduates. Use of cigarettes, marijuana, and other illicit drugs before high school and early initiation into drugs increases the propensity to drop out. The more socially unacceptable the substance, the stronger the association with dropping out. Mensch and Kandel stated, "The most important contribution of this study is the documentation of the impact of the involvement in drugs as an additional and unique contributor to early school leaving" (p. 110). Specific data from the study are shown in Table 7.

Table 7

Drug Involvement of High School Dropouts and Graduates *

Drug	Users: Dropouts		Users: Graduates	
	Male (1,437)	Female (1,168)	Male (4,488)	Female (4,570)
	Percentage Who Use:			
Cigarettes				
less than 1 pkg/day	90	88	80	79
more than 1 pkg/day	57	50	33	28
Alcohol (in the past 30 days)	77	55	81	69
Marijuana				
used at least once	77	65	67	59
100 or more uses	36	17	20	10
Cocaine	27	18	21	13
Other drugs	42	33	31	15

* Note. From "Dropping Out of High School" by B.S. Mensch and D.B. Kandel, 1988, Sociology of Education, 61 (April), p.109

Mensch and Kandel go on to say:

> The data reported provide documentation that participation in a variety of activities in adolescence that are deviant because they contravene general societal norms, such as delinquency or use of marijuana and other illicit drugs, or because they contravene age related norms for adolescents, such a sexual intercourse, pregnancy, or cigarette smoking greatly increase the risk of dropping out of school. (p.112)

The research that addresses this factor shows that a strong relationship exists between substance abuse and dropping out of high school but additional research needs to be conducted before conclusions can be generalized.

The category of deviant behavior in society is considered a major category that identifies characteristics of dropouts. The common characteristic of dropouts in this category is involvement in discipline incidents.

In-school Factors (Precipitators and Lack of Belonging to School)

The characteristics included in the category of in-school factors are grade retention, school grade/academic achievement, achievement test scores, extra-curricular

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<u>In-school Factors (Precipitators and Lack of Belonging to School)</u>

The characteristics included in the category of in-school factors are grade retention, school grade/academic achievement, achievement test scores, extra-curricular

participation, absenteeism/tardiness, special education status, and poor relationships with teachers.

Grade retention. Grade retention is consistently reported in the empirical research as a predominant factor associated with dropping out of school. Grade retention is sometimes measured by the age of a student in a particular grade. For example, Cairns et al. (1989) found that a relationship existed between the likelihood of dropping out and age in seventh grade. Camayd-Freixas and Horst (1986) found that dropouts were three times more likely to have been retained than to have progressed normally the preceding year. The authors found a student at least two years overage for a grade strongly predicts his or her dropping out. Over one fifth of the overaged eighth graders dropped out. The study then concluded that "perhaps the single best predictor of dropping out is being overage for one's grade" (p. 40). The Austin Independent School District (1982) found that students in the eighth grade or less at age 14 are much more likely to drop out. Velez (1989) found that being older than one's classmates increases the odds of dropping out, specifically for Chicano and Puerto Rican students. Fernandez et al. (1989), who also studied dropping out among minority students, found that grade retention and academic achievement are the two predominant areas that needed to be addressed in dropout prevention

programs for Hispanics. Gastright and Ahmad (1988) found that 20% of the dropouts in his study had spent 13 or 14 years in school but did not receive a diploma.

One of the 32 empirical studies focused solely on the relationship between grade retention and dropping out of school. Rice, Toles, and Schulz (1988) examined the data from Hess and Lauber's study of dropouts in Chicago Public Schools and found that the dropout rate increases sharply as a student's entry age into high school increases. The dropout rate for students who entered high school at less than fifteen years of age was 32.2%. The dropout rate increased to 68.3% for students who were 16 years or older when they entered high school. In addition, 15 year olds who enter high school have a 24.1% higher dropout rate than students who enter high school at age 14. The combination of entry age and gender had the most dramatic effect upon males who were older than 15; within this group, three students dropped out for every student who graduated. The research also showed that the combination of being overage and having low reading scores significantly adds to the likelihood that a student will dropout. The findings of the studies included in this review unanimously agree that grade retention is related to dropping out of school.

School grades/academic achievement. Evidence is strong within the empirical research that poor academic performance,

shown by grades in school, is a primary characteristic of students who drop out of school (Austin Independent School District, 1982; Cairns et al.,1989; Ekstrom et al.,1986; Gastright and Ahmad,1988; Pallas, 1984; Valverde, 1987; Wagner, 1991; Wilcynski,1986). Rumberger et al. (1990) found, in addition to dropouts having lower grades than graduates, a direct correlation exists between family influences such as parenting style, family decision-making style, parental reaction to grades, parent's educational involvement, and academic achievement. This finding supports the research that shows an indirect link between family influences and dropping out. Barrington and Hendricks (1989) found that the dropouts in his study showed a clear indication of academic problems by the third grade. These results support the data from Table 6 showing that the majority of studies that address academic performance found it an important factor associated with the dropping out process.

Achievement test scores. Achievement test scores are difficult to compare among studies because different studies use different test scores. Rice et al. (1988) found that the dropout rate was strongly associated with the student's eighth-grade reading equivalency scores. Students with low scores had dropout potential from 40 - 65%. Barrington and Hendricks (1989) found that the dropouts perform poorly on achievement tests with their scores falling below their

classmates and below the expected level given their academic grades. These findings support the information in Table 6 showing that performance on achievement tests is associated with the dropping out process.

Absenteeism/tardiness. Rumberger et al. (1990) found that dropouts had poor attendance patterns and Wagner (1991) found that special education dropouts had high absenteeism. In addition, Jenifer (1989) found tardiness an important factor in determining who drops out. Taken together with the data from Table 6, the empirical research shows that absenteeism and tardiness are important factors associated with the dropping out process.

Special education status. A very small body of empirical research addresses the problem of special education students who drop out of high school. Among the 32 studies, some address special education status as a characteristic of the school program, while others specifically studied the characteristics of special education students who drop out of high school. Camayd-Freixas and Horst (1986) found that regular education students dropout less than students in special education. Among those who are in special education, the students who spend the most time outside the regular classroom are more likely to dropout. Barrington and Hendricks (1989) found that dropouts are significantly more likely to have been referred for

an evaluation for special education services than were graduates. Jenifer (1989), however, found that special education status is not an important factor in dropping out. Over 90% of the sample in this study were in a regular education programs making the sample in special education (21 students) so small that it would be difficult to make generalizations based in these results.

Among the studies that focused on special education students who drop out of school, Blackorby et al. (1991) found that the overall dropout rate (or as the study characterized it, "students with interruptions") for students identified as mildly disabled (defined in the study as students with mild mental retardation) was alarmingly high and was more than double the number of graduates (462-students with interruptions and 169-students who graduated). The researchers found that dropping out of school disproportionately affects students labeled "behavior disordered". They reported students with behavior disorders represent 14% of the special education population, 17% of the students with interruptions, but only 8% of the graduates. In addition, they report that the majority of special education students in their study who left school actually returned within a year of their departure. The authors felt that this particular finding suggests the need to

conceptualize a "dropout cycle," wherein many school dropouts actually return to school and sometimes graduate.

Jay and Padilla (1987) conducted a statewide study of the dropout problem among California special education students and found the overall dropout rate for secondary special education students to be 6.6% during the 1985-86 school year. However the authors state in their study:

> Although the annual dropout rate for secondary special education students was less than 10%, the dropout rate for a single age cohort compounded each year from 10th grade through 12th grade is likely to be significantly higher, probably closer to 20%. (p. 15)

According to Jay and Padilla, the dropout rates by specific primary handicapping condition are as follows (the percentage of students with disabilities who have that specific disability is in parenthesis): (a) learning disabled (those students diagnosed with a specific learning disability) - 7.5% (75.5%); (b) speech impaired - 4.9% (5.3%); (c) communicatively disabled (those students diagnosed as hard of hearing, deaf, and/or deaf-blind) - 2.8% (2.0%); (d) physically disabled (those students diagnosed as visually impaired, blind, orthopedically impaired or otherwise health impaired) - 4% (4.1%); and (e) severely disabled (those students diagnosed as severely emotionally disturbed, mentally retarded, or multiply disabled) - 4.1%

(12.4%). Fewer than 25% of the districts had dropouts who had a primary disability other than a learning disability. The dropouts who were physically disabled were characterized by a high rate of absenteeism attributed to health problems. The authors also concluded that special education students (specifically students with specific learning disability or mild mental retardation or severe emotional disturbance) who are served in special day classes are most at risk of dropping out because these students tend to be less integrated into the regular student population than special education students who are not served in special day classes. In addition, the severely disabled, showing a lower dropout rate, tend to stay in school until they age out at 22 because they are unaware of the social stigma attached to their placement. It is important to note here that this study uncovered considerable variation in dropout rates for special education students depending on how dropout rates were calculated and for which disability group they were calculated.

In addition to examining the school records and state data, Jay and Padilla (1987) also conducted a survey of school staff and administrators. They found that the staff reported that special education students dropout for the same reasons regular education students dropout; mainly, poor academic performance and poor social adjustment or lack of investment

in school. District and school staff also perceived the special education dropout rate to be lower than the regular education dropout rate even when it was the same or higher. Overall, the survey respondents reported that the special education dropout is similar to the regular education dropout.

Wagner's (1991) study, the National Longitudinal Transition Study of Special Education Students (NLTS), also focused on students with disabilities. She collected data from school records, telephone interviews with parents and dropouts, and a survey of educators in schools. Wagner found that a significantly higher percentage of students with disabilities drop out of school than regular education students. Wagner compared the data between her study (with a sample of 1,620 students with disabilities) and a sample of students (6,595 students not enrolled in special education programs) from the National Longitudinal Survey of Youth (NLSY) (a longitudinal study conducted by the U.S. Department of Labor). The results show a difference in the dropout rate between 43% (NLTS) and 24% (NLSY). Like Blackorby et al. (1991), students labeled seriously emotionally disturbed were significantly more likely than students in any other disability category to have dropped out (SED - 50%, LD - 32%, MR - 30%, speech impaired - 28%, other health impairments - 25%). Wagner concluded, similar to dropping out of school for regular

education students, dropping out of school for special education students is the culmination of a cluster of school performance problems, including high absenteeism and poor grade performance.

There appears to be enough evidence in this body of empirical research to show the need for more research of the dropout phenomenon in special education. The results of the current research is evidence that the dropout rates for special education students are very high. Certain disability groups have an increased likelihood of dropping out. More national research and examination of national statistics, however, needs to be done before definite conclusions can be reached.

Returning to School or GED

The empirical studies about dropouts who return to school or eventually receive their GED included important information. Three of the 32 studies made reference to the number of dropouts eventually completing a GED program. Mensch and Kandel (1988) found that one third of the students who had dropped out, according to the NLSY, eventually received a GED or other diploma. This would change the noncompletion rate found by that study from 22.3% to 14.8%. In Stedman's (1988) analysis of HS & B Survey data, 44% of the 1980 sophomores who dropped out earned a high school degree or equivalency by 1986. Poulos (1986), in his Detroit

study, found that one fifth of the 532 dropouts he studied had enrolled in a GED program and one tenth were involved in some kind of adult education program or had re-enrolled in regular school. Although most of the studies did not follow the dropout long enough to collect this information, the three that did show that some dropouts do continue their education after leaving high school.

Related Findings

In addition to the information presented under each characteristic, the empirical studies presented some interesting findings that did not fall into a particular characteristic category. Camayd-Freixas and Horst (1986) studied the dropout problem in Boston Public Schools and found that the overall dropout rate was going down slightly, 14.3% in 1986 compared to 16.4% in 1984. They view this as proof that their problem is at least stabilizing. Blackorby et al. (1991) did not use the term dropout in their study, instead they used the term "students with interruptions". These authors found that the typical mildly-disabled student with interruptions had already left school on two occasions before the study but the majority of the students in the study actually returned within a year of their departure.

Baca et al. (1989) found that 19% of the dropouts attended eight or nine schools vs. 5% of the graduates and 36%

of the dropouts attended 5 to 7 schools. Velez (1989) found that the number of changes in school since grade five increased the chances of students dropping out.

Kaeser and Hooper (1983) examined the incidence of dropping out among seventh and eighth graders in Ohio. Their data show that the dropout rate for this population is increasing despite the decreasing enrollment numbers. They also reported very limited information on dropouts in these grades. The authors concluded that major characteristics of the dropouts they studied were pregnancy, overage due to retention, and runaways, although all students with these characteristics did not necessarily dropout. It is important to note, however, that the largest category of students leaving school in this particular age group is "lost to the system/whereabouts unknown." (42.2% or 169 of the seventh-grade dropouts and 29.5% or 180 of the eighth-grade dropouts). The second largest category is "miscellaneous" which consisted of students who could be lost or transferred. If the two categories were combined, they account for almost 70% of the seventh-grade dropouts. They concluded that the aggregate data for the state and specific data for the individual districts are not accurate because there is not a clear definition of who should be counted as a dropout. In addition, dropout

data cannot be compared because of the lack of uniform definitions.

Pallas (1984) studied the dropout problem from three perspectives on why students leave school (a) academic performance, (b) social disability (poor personal and social adjustment), and (c) accelerated role transitions. All three of the perspectives had substantial associations with dropouts when background factors were controlled as well as when they were not. Pallas (1984) found:

> This analysis thus identifies a diverse array of phenomena, both in school and out, both ascribed and achieved, as determinants of high school graduation or attrition. (p.203)

The dropping out process is not monolithic. Poole and Low (1982) concluded the same thing, "A major dimension of the school staying or leaving process in the congruence between individual abilities, values, and expectations and the value climates at home and at school" (p.60).

Stedman (1988) determined that membership in the at-risk groups of single-parent, low-income families or those who marry and/or have children while in high school, does not directly affect dropout behavior but does so indirectly by affecting other areas of a child's life. He concluded, however, that high school students who belong to these three at-risk

groups are more likely to drop out than other students. Barrington and Hendricks (1989) characterized the process of dropping out this way:

> ...the poor attendance and underachievement increases as the student goes into middle school, and by seventh grade failing grades are present. By ninth grade a pattern of high absences, failing grades, and low overall GPA is well established, and it continues until the student drops out of high school. (p. 316)

Martin (1981) found that 80% of the dropouts in his study reported that they would stay in school if they had it to do all over again.

Based on the results of the 32 empirical studies there are differences between local studies and national studies that address characteristics of dropouts. Local studies, in general, are able to provide more indepth information about characteristics of dropouts because they are dealing with a smaller sample size. The researcher conducting a local study does not have to rely on information from a national database which may or may not investigate the particular characteristic in which he is interested. He can design the study to suit his own research purposes. The researcher conducting a local study can collect information about characteristics of dropouts

in a specific district, thereby providing information which may be unique to that district to help address the dropout problem. It can be difficult for school officials to examine results of a national study and determine what the findings mean for their district.

National studies enable the researcher to generalize the results to a larger population because larger sample sizes are used. It is difficult to generalize the results of a study in rural Idaho with a sample size of 50 to the population of the entire United States. National studies also provide results on which researchers can base their local studies. Researchers using results from national databases can examine certain information from the database in greater detail (i.e. Fernandez et al. examined dropping out among minority youth using the HS&B Survey database). Local studies and national studies make unique contributions to the body of research on the characteristics of dropouts.

Answer to Research Questions

Based on the information presented in this integrative review, the research questions can be summarized as follows:

(1) What are the major categories that identify characteristics of dropouts?

The four major categories of dropout characteristics are: demographic factors, social and family factors, deviant behavior in society factors, and in-school factors.

(2) What are the common characteristics of dropouts?

The most commonly stated characteristics of dropouts are: ethnicity, low socioeconomic status, coming from a single-parent family, high rate of absenteeism, involvement in discipline incidents, grade retention, low academic performance, and poor achievement test scores.

(3) What are the major issues which surround the identification of dropouts?

Within the 32 empirical studies integrated for this review, the major issues are: (a) the lack of a uniform definition of the term dropout, (b) the inaccuracy of statistics measuring local, state, and national dropout rates, (c) the relationship between grade retention and dropping out, (d) the high dropout rate in special education and the need for more research in this area, and (e) the need for more research on how many dropouts return to school or eventually get their GED.

(4) What policy issues emerge from the research regarding characteristics of dropouts?

Within the 32 studies integrated for this review, there are 5 major policy issues emerge. First, the research shows

that students who will eventually dropout can be identified as early as third grade, therefore dropout prevention measures should begin as early as elementary school. Second, there is the need for a uniform definition for the term dropout and a standard way of measuring dropout rates on the national level, the state level, and the local level. This can be done by including the definition and the standardization methods in appropriate educational legislation. In order to have a clear picture of the extent of the dropout problem in this country, standard measures should be implemented which will result in accurate statistics. Third, the state educational associations should create new policies pertaining to grade retention. Teachers should first be educated as to the overwhelmingly negative effect that grade retention has on students and then work with policymakers to create alternative solutions to grade retention. Fourth, their is not enough information available on the extent of the dropout problem among students with disabilities. The research that is available indicates that students with disabilities drop out at a very high rate. Before policies can be formulated that start to address the dropout problem in special education, policymakers have to know the extent and specifics of it. Once school officials know more about why students are dropping out of special education programs, they can adjust the programs to meet the needs of

the students. Fifth, the limited information available shows that a large number of high school dropouts are returning to programs for a GED or other diploma. More information on exactly how many dropouts eventually receive a GED or other diploma can assist school officials in designing adult education programs specifically for this population.

(5) How are the studies divided among the state, local, and national levels?

There are 17 local studies, 2 state studies, and 13 national studies. Eight of the national studies used the HS & B Survey database. Local studies are conducted more often than state or national studies. It is easier to conduct a local study within an individual school district which has one method for calculating dropouts and one definition of a dropout than it is to conduct a national study. Researchers designing a statewide or national study may have problems combining the different local methods of collecting data on dropouts and the different definitions of dropout. It is also less costly to conduct a local study than a state or national study. In order to collect valid state data, a uniform data collection method and a single definition of dropout are necessary. Once both of these are in place, data among local districts within states can be compared and combined.

CHAPTER FIVE

Discussion

Introduction

The purpose of this study was to examine the empirical research from 1980 to present pertaining to characteristics of high-school dropouts and to synthesize the information from the studies into an integrative review. The data from the empirical research on characteristics of dropouts were consolidated, and pertinent information was extracted to develop this integrative review. The results of this research is information on the characteristics of dropouts including a list of the most common characteristics. This chapter provides a discussion of the findings of the literature review, the integrative review, and the implications for policy development and further research.

Summary of Findings

The literature review addressed the causes and consequences of dropping out of high school. According to the research, what causes students to drop out of high school is not clear. Authors group the many causes into several major categories: demographic factors, family-related factors, school-related factors, economic factors, and individual factors. This literature review suggests that minority status and

socioeconomic status are two characteristics closely related to dropping out. These characteristics alone do not cause students to drop out. Research shows the dropping out process is a complex one with numerous causes. Taken along with other characteristics, no one single factor emerges as the sole cause for dropping out.

The literature review also shows that peer influence is associated with dropping out. In junior and senior high school a student is developing his or her individual identity. The peers surrounding the student contribute to this development. As a result, important decisions such as whether to stay in school are influenced by peers.

School-related factors that are associated with dropping out are grade retention, dislike for school, dissatisfaction with teachers and, above all, poor academic achievement. Involvement in discipline issues including suspension and expulsion are other factors associated with the dropping out process. The research from the literature review suggests that economic reasons can also lead a student to drop out of school. Often students who drop out need to work to help their families. In addition to economic, demographic, and school-related factors, the research shows that individual factors may cause a student to drop out of school. These individual factors include pregnancy, getting married, and low self-esteem. A

combination of some or all of these factors is the major cause of dropping out.

The literature review suggests that there are both individual and societal consequences to dropping out. The societal consequences are the lack of skilled workers in the labor force, high unemployment rates, and increased welfare dependency and other demands on social services. The economic cost of the dropout problem is crippling. The unemployment rate for dropouts is high and those who are employed are usually in low-level jobs. The individual suffers because, without a high-school education, he or she is not qualified for most steady, well-paying jobs. In summary, the individual consequences are a higher unemployment rate, significantly lower salaries, and low-level jobs.

Chapter Four presents a summary of the results of the empirical research on categories of characteristics of dropouts including demographic factors, social and family factors, personality factors, early transition to adulthood factors, deviant behavior in society factors, and in-school factors. The results suggest that the major categories that identify characteristics of dropouts are: demographic factors, social and family factors, deviant behavior in society factors, and in-school factors. The results of the integrative review also suggest a set of characteristics prevalent among high school

dropouts. The most commonly stated characteristics in the major categories are (a) ethnicity, (b) socioeconomic status, (c) coming from a single-parent family, (d) high rate of absenteeism, (e) involvement in discipline incidents, (f) grade retention, (g) low academic performance, and (h) poor achievement test scores. Based on these characteristics, a profile of the typical high school dropout emerges. The dropout is a minority student, from a low SES background, with one parent at home. He skips school often and, when he does attend, is involved in disciplinary incidents. He is one or two years behind other students his age and performs poorly in classes and on achievement tests. When asked to describe a typical dropout, teachers and school administrators often describe a profile remarkably similar to this one. This integrative review provides the empirical research to support their profile.

While conducting research for the literature review and the integrative review the researcher identified a number of policy issues surrounding the dropout problem. The major issues are (a) the lack of a uniform definition of the term dropout; (b) the inaccuracy of statistics measuring local, state, and national dropout rates; (c) the relationship between grade retention and dropping out; (d) the high dropout rate in special education and the need for more research in this area; and (e)

the need for more follow-up data on dropouts returning to school or eventually receiving a GED.

The results of this research suggest that the overall dropout rate is difficult to determine because of the inaccuracy of dropout statistics. The results also demonstrate that factors, such as the definition of dropout and the method to calculate rates, should be considered when determining this overall rate. Research studies show that a large number of dropouts return to school for GEDs or other diplomas. The NCES should continue to follow dropouts from national studies such as the HS & B Survey and other national research efforts to determine the exact number of dropouts that return to school or eventually receive their GED. This is information that is imperative for the education community to further illuminate the dropout issue and, depending on the results, to justify allocating funds to adult education programs for high-school dropouts. The NCES research should follow dropouts until they are 25 to 30 years old. Many dropouts do not decide to return to school or enroll in a GED program until they have been out of school for a number of years. Once they are enrolled in a high school or GED program, it may require some time for them to finish. Therefore, additional follow-up on these students can provide accurate data on the eventual high-school completion rates for dropouts. Past experience has shown that tracking dropouts

once they leave school has been difficult. If accurate up-to-date records are kept, however, and the researchers are persistant, tracking these students for five years after they leave school can be done successfully. This information will have an impact on future policy initiatives that address the dropout problem.

Implications for Policy Development

The categories of dropout characteristics and the list of characteristics themselves can assist teachers, parents, and school officials in the early identification of potential dropouts. These categories and characteristics also raise some school policy issues that need further exploration. Ethnicity, socioeconomic status, and coming from a single-parent family are all factors that cannot be changed by school intervention. However, these factors should act as early warning signs, putting school officials and on notice that these students are at risk of failure. The research suggests that the amount of parental support received is related to dropping out. The schools should make an effort to involve parents in their child's education. Conferences can be held on weekends or in the student's home instead of school. Workshops for parents can be offered dealing with issues that effect both the home and school such a violence, drug abuse, and employment after high school. Absenteeism, grade retention, low academic

performance, achievement test scores, and involvement in discipline incidents, are all factors upon which schools have influence. A system should be developed and implemented that identifies students who begin to show frequent absences as early as elementary school and junior high school. These students would then be monitored and the reasons for their absences addressed before they stop attending school altogether. Discipline policies should be reviewed by schools. The students who drop out show involvement in a high number of discipline incidences. They are the students the vice-principal sees on a regular basis. The reasons for their disruptive behavior needs to be addressed in order to try to prevent it from happening again. One method that has proven to be successful is establishing a peer grievance committee. If a student is involved in a disciplinary incident, he/she would go before a committee of peers who would recommend appropriate consequences. Experience has shown that a student is influenced to a greater degree by what their peers say than by what the principal says. In this case the influence of peers in high school can be used towards a positive end, ultimately reducing disciplinary problems.

The results of both the literature review and the integrative review raise questions concerning grade retention policy. All states and local districts need to reassess their

grade retention policies, because the research overwhelmingly shows that grade retention is far more detrimental than beneficial to students. The evidence suggest that holding students back increases rather than decreases their risk for dropping out of school. This increase could be due to the fact that students who are retained often feel alienated and out of place in school. They are older than their classmates and may be socially ahead as well. The academic failure combined with the feelings of alienation can cause a student to drop out. The results found in this research show a clear link between grade retention and dropping out of high school. Yet schools continue to retain students believing that they are acting in the best interest of the student. The research results prove that this is not the case. However, promoting students who are failing courses is certainly not the answer. Alternatives to grade retention need to be explored. Poor academic performance and grade retention are the two biggest dropout predictors. This is clear evidence of failure by the educational system to perform its job. The focus however continues to be on the student's failure rather than the school system's failure. The schools blame the dropouts and their families and the dropouts blame the schools. This review has shown that there are more school-related factors that lead to dropping out than any other category. These are factors educators can do something about.

School programs should be designed with the specific needs of the students in mind. Students have to understand how the material they are learning in high school relates to life after school. Students who are performing poorly in school or about to be retained should be targeted for extra assistance or an alternative academic program that is suited to their learning style. School systems should offer more vocational education programs that combine academic skills with career exploration and vocational training. These programs motivate students to learn academic skills because they understand how the skills will help them in future jobs and living on their own. Other programs that have proven to be effective are Business Education Partnerships, mentor programs where professionals act as mentors to high school students, and internship programs. Students who participate in these programs are trained in specific skill areas, have valuable work experience, and are capable of living independently rather than depending on society to support them.

Both the integrative review process and the literature review found that there is very little information and empirical research available on the extent of the dropout problem in special education. "Special education students constitute a rather small percentage of the total student population and, therefore, have received little consideration when either

definitions of dropouts or graduates are considered or criteria are adopted measuring these outcomes" (MacMillan, Balow, Widaman, Borthwick-Duffy, Hendrick, & Hemsley, in press, p. 5). Because a lot of money is spent annually on special education programs, it is fiscally responsible and sound program development for the educational community to evaluate the effectiveness of these programs. More research needs to be conducted, not only focusing on the size and scope of the problem, but also on dropout rates within disability groups, particularly emotionally disturbed and learning disabled students. The NCES should conduct national research into the extent of the dropout problem in special education. This can include a national follow-up study based on the recent results of the National Longitudinal Transition Study in addition to other research efforts to address this problem.

Researchers have identified the factors that place a student at risk for dropping out. They agree that dropping out is a complex process beginning as early as elementary school; dropouts can be identified relatively accurately as early as third grade. The federal education dollars now spent on dropout prevention programs for high-school students could be better spent in addressing needs of and preventing the disengagement process of at-risk elementary-school and special education students.

The results show that the overall national dropout rate is probably inaccurate. Currently, acceptable methods of measuring the dropout rate are numerous. In addition, the number of definitions of the term "dropout" rivals the different methods of measuring the problem. Local, state and national educators measure dropout statistics and define the term dropout differently, and for different purposes; therefore it is impossible to know who is accurate or correct. It is difficult to compare statistics across districts or within states. There is a need for uniformity, one method and standard for everyone to follow and one definition for everyone to use. No accurate comparisons can be made or improvement seen until this is done. "As education researchers and policy analysts work toward solutions for this national problem, consistent measures over time are a basic necessity" (Kominski, 1990, p. 309).

Suggestions for Further Research

Based on this integrative review the characteristics of dropouts fall into three areas that are in need of further research. They are (a) the role of the family in the dropping out process, (b) the role of peers in the dropping out process, and (c) the nature and extent of the dropout problem in special education.

This research included in this integrative review suggest that the amount of family support received by students is

related to whether or not they leave school before graduation. Currently, there is not enough research that examines exactly how a dropout's family is involved in his or her decision to leave school. Ethnographic case studies should be conducted that are structured around the dropout and his experiences during the dropping out process. Research has shown that dropouts can be identified accurately before they leave school. A case study methodology should be used to study two or three potential dropouts and their experiences. Ethnographic research enables the researcher to examine subtle variables such as parental influence. This can be accomplished through the use of observation, interviewing techniques, and document analysis. A powerful way to understand how an individual, such as a dropout, experiences life is to observe them. A careful and trained observer can detect the different influences operating in a person's daily experiences. Unstructured interviews also provide important insight into the influences in a person's life. Part of the research should also include document review. The number of family members living at home, their ages, whether they dropped out of high school or not, and their relationship to the student are all important variables that should be included as part of this research. As seen in the methodologies of research on characteristics of dropouts, reviewing records provides significant information

that is not often available through observation and interviewing. The research presented in this review should be taken a step further in order to assist in the understanding of the families' role in the dropping out process.

Ethnographic research is also recommended to examine the role of peers in the dropping out process. The researcher should interview and observe students and their interactions with one another. This should be conducted over at least one year in order to collect substantial data. As with parental influence, peer influence is not a variable that can best be measured quantitatively. The subtle ways friends effect one another is best captured through observation and experiencing what these students do every day. An interviewing technique that could provide good data is the use of focus groups. Talking with groups of students and observing how they respond to one another can yield more information than one-on-one interviews. More research examining the role of peers in the dropping out process could provide insight into ways to use peer influence to possibly deter students from dropping out.

Another variable in need of further research is the attitude of the student toward school. This factor could be included in ethnographic research on peer influence and dropping out. Although methods that measure attitude quantitatively are available, the information about a dropout's

attitude towards school that is acquired through observation and interviewing is what is needed to add to the current research.

As stated in the policy implications section, research needs to be conducted investigating all aspects of the special education dropout problem. Based on available research, it appears that the dropout problem in special education is more wide-spread than in regular education. This phenomenal problem needs to be addressed immediately, first through research measuring the extent of the problem and then through policy adjustments. In order to establish a more extensive research base, national efforts similar to the National Longitudinal Transition Study of Special Education Students need to be implemented. The NLTS consists of a database which can be examined focusing on the students identified as dropouts (similar to the studies included in this integrative review which used the database from the HS&B Survey). Local descriptive studies similar to those conducted by Poulos and Jenifer need to be conducted focusing soley on students in special education. Fortunately, the National Education Goals Panel which monitors progress toward the goal of a 90% graduation rate, has recognized the need for more information on the extent of dropouts in special education. One of the issues they are currently addressing is how special education

students should be counted in reporting high-school graduation and dropout rates (National Education Goals Panel, 1991).

The dropout problem is one for which there are no simple solutions. The first step in addressing this complex problem is to address the policy issues and the areas in need of further research identified by this review.

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Appendix A

Summary of Empirical Studies

Austin Independent School District (AISD). (1982). "Mother got tired of taking care of my baby." (Report No. 82.44) Austin, TX: Author. (ERIC Reproduction Service No. ED 233 102)

Purpose - The purpose of this study was to explore the nature and extent of the dropout problem in Austin and to describe characteristics of dropouts. This study also examined the reasons for and consequences of dropping out.

Methodology - Dropouts were defined as students who left AISD and for whom no evidence that they entered another school or school district could be found. All students who were at least fourteen years old in 1978-79 school year were identified and their pattern of entry and exit from the system tracked through the fall semester of 1983 when the students were 18 or 19 years old. The school records of those students who left AISD were examined to determine whether or not a transcript was requested by another school district. The students whose records did not have transcript requests were considered dropouts. Their records were then examined more thoroughly for descriptive information to be used in the study.

Results - Hispanic females were more likely to drop out than Hispanic males but among blacks and whites, men were more likely to drop out than females. Hispanic students drop out at twice the rate of whites and blacks. Students with low GPAs were more likely to drop out. Students who were in eighth

grade or less at age 14 were more likely to drop out than those who in ninth grade or more at age 14. There were no negative, ethnically-related influences operating independently of the school-related characteristics included in the analyses. The more discipline incidents the student had on their record, the more likely they were to leave early. One third of the students dropped out before reaching the legal age for leaving school. The year with the greatest number of dropouts was the senior year.

Strengths or weaknesses - A weakness of this study is that there is limited methodological information provided. A strength of this study is that there are interesting results that are unique to the geographic area but also support national findings.

Baca, C. C., Burchard, J., Broyles, S., & Berglund, C. (1989). Women at risk project. Dropout factors study. (Report No. 021 378) San Diego, CA: San Diego City Schools, Community Relations and Integration Services Division. (ERIC Document Reproduction Service No. ED 312 741)

Purpose - The purpose of this study was to identify a set of predictive dropout characteristics of females by racial/ethnic background and a set of intervention strategies to address those characteristics. This study also assessed the accuracy of existing high-risk criteria for identifying potential female dropouts, developed differential criteria specific to female, and developed identification criteria specifically for women from racial/ethnic groups and from disabled young women.

Methodology - The dropouts and graduates from 1985-86 and 1986-87 school years were identified. Because each year used different definitions of the term dropout, the number of students who dropped out differed by 3,000 students. Demographic variables were collected on the dropouts as well as on the graduates. Demographic analysis of the two groups were conducted and frequency distributions for each variables were compared. After development and field testing, a telephone survey was conducted. Six hundred and sixty eight of the dropouts were located and interviewed and 886 of the graduates were interviewed. Frequency distributions for each answer on the survey, by dropout and graduate status, were examined by gender and ethnicity and compared between groups. Stepwise multivariate discriminant analyses were used to discern which variables were most important in distinguishing between the two groups of students.

Results - Males and females dropout of school at approximately the same rate. The factor which most frequently influences females to drop out is falling behind in school. Males were most influenced by falling behind, maintaining a low G.P.A., suspensions, and negative feelings toward school. On the average graduates scored higher on the Comprehensive Test of Basic Skills than dropouts. The authors determined that drug use was a factor that needed in-depth examination. In addition, both males and females were influenced to drop out by falling behind in school, having a low G.P.A., living in a single parent home, being expelled, being retained, and having a child.

Strengths or weaknesses - A weakness of this study is that the sample was not randomly selected. Another weakness is that

the use of an indirect measure of socioeconomic status (SES) limits the correlation that can be made between SES and student academic achievement. A third weakness is that none of the study's participants were students with disabilities. A strength of this study is that this research is based on both school record and interviews with dropouts, which lends to its credibility. Another strength of this study is that it focused on women as well as providing other information.

Barro, S. M. & Kolstad, A. (1987). Who drops out of high school? Findings from High School and Beyond. (Report No. CS-87-397c) Washington, DC: Center for Education Statistics. (ERIC Document Reproduction Service No. ED 284 134)

Purpose - The purpose of this study was to examine the influences of personal and family background attributes, economic and locational factors, school characteristics and educational experiences, and certain student behaviors and choices on the decision to leave high school before graduation.

Methodology - This report presents both descriptive statistics on the dropout rates associated with the values of the variables in question and estimates based on the multivariate models of net effects of the variables on the probability of dropping out. The database used for this study was the baseline and first follow-up from The High School and Beyond Survey (HS&B Survey) data, the HS&B Survey transcript file, and a specially constructed set of economic data derived from files prepared by the Bureau of Labor Statistics (descriptions of all data are included in the study). The principal descriptive statistical method used in this report is cross-tabulation analyses, and the

principal medium for presenting the results is the comparative dropout rate table, which shows the rates at which students in specified categories or with specified characteristics leave school. To address the problem of incremental influences, multivariate analysis were conducted using the event-history methodology.

Results - Dropout rates are higher in the South and the West than in the Northeastern and North Central regions of the country. The rate is also higher in urban areas than in rural and suburban areas. The difference in level of education between the parents of dropouts and parents of graduates was significant. The study found that having children and/or a job were significant factors in the dropout process. The study also found that males dropped out at a higher rate than females, Hispanics and blacks dropped out more frequently than whites, and that grade retention, academic performance, and test scores were all significant correlates to dropping out.

Strengths or weaknesses - A weakness of this study is that the statistical analysis and the charts were difficult to interpret. A strength of this study is that it provides a good analysis of the HS&B Survey results. Another strength is the detailed information the author included in the study about the results, the methodology, and the background of HS&B Survey.

Barrington, B. L. & Hendricks, B. (1989). Differentiating characteristics of high school graduates, dropouts, and nongraduates. Journal of Educational Research, 82(6), 309 - 319.

Purpose - The purpose of this study was to address four questions concerning graduates, dropouts, and nongraduates (a) are there characteristics that differentiate prospective graduates from those who will not complete high school?; (b) are they measurable using data available from the students records?; (c) if such differentiation is possible, how early in a student's career can students at risk of noncompletion be identified?; and (d) are the characteristics of students who will stay four years of high school and not graduate different from those of dropouts and graduates?

Methodology - Students who entered high school in the 1981-82 academic year were the original sample (651). In 1985 they were divided into the categories depending on whether they graduated, dropped out, or were still in school. Final sample included 51 dropouts, 32 nongraduates out of school, 24 nongraduates still working on their diploma, and 107 graduates. A list of characteristics thought to be predictive of dropping out was compiled and information relevant to those characteristics was extracted from the files.

Results - The results provided the following profile of a dropout: a student whose records show an indication of academic problems by third grade, achievement test scores lower than classmates and lower than expected considering the intelligence level, poor attendance that increases as the student goes through middle school, and by the ninth grade a pattern of

high absenteeism and failing grades. Although a lower percentage of the dropout group lived in families with two parents present than did the graduates, more than two thirds were living at home with both parents in the beginning of the ninth grade. No difference between dropouts and graduates was found as far as gender or school program. Elementary school data identified potential dropouts with a high degree of accuracy. Differentiation between graduates and dropouts can be made with 70% accuracy by third grade, 90% by ninth grade.

Strengths or weaknesses - A weakness of this study is that there was missing data on some of the students due to a request not to include it or a transfer from another school - this, however, only effected the elementary school information. A strength is that this is a solid study with comparison among four groups of students.

Blackorby, J. Edgar, E., & Kotering, L. J. (1991). A third of our youth? A look at the problem of high school dropout among students with mild handicaps. The Journal of Special Education, 25(1), 102 - 113.

Purpose - The purpose of this study was to obtain information on the proportion of students identified as mildly handicapped who, during their school years, were identified as high school graduates and similar students who interrupted their schooling and to determine the factors related to these outcomes.

Methodology - This retrospective study was conducted on samples of two populations, special education graduates and "interrupters." There were three sets of graduates (122, 75,

94) and two sets of nongraduates (197 and 265). All of the information used in the study was collected from the student's school records. The researchers utilized a record review of 22 items related to demographic, referral, and school placement information.

Results - The groups showed very little difference based on gender, but did show differences related to ethnicity and handicapping condition. African-Americans were over represented in the interruptions as were students with behavior disorders. Students who interrupted their schooling more often had differing last names than their identified parents. Students who interrupted their schooling averaged more school transfers and school releases than graduates. The typical student in this study had already left school twice before the study began implying that leaving school does not necessarily mean never returning. (This is why the term interruption in used rather than dropout.) Interrupting school may be used as a predictor of not graduating. The demographic characteristics of ethnicity, handicapping condition, and family last name all relate to graduation status. The authors are unconvinced that individual student characteristics will provide insight into developing strategies in helping greater numbers of special education students stay in school.

Strengths or weaknesses - A weakness of this study is that it relied solely on information from students records for results.

Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. Child Development, 60, 1437-1452.

Purpose - The purpose of this was to examine behavioral, cognitive, and demographic factors associated with early school dropout.

Methodology - The longitudinal research sample consisted of 475 subjects (248 females and 227 males). At the beginning of the study they were enrolled in seventh grade in one of three middle schools located in different communities. Efforts were made each year to contact the subjects and interview them regardless of where they lived. The time period was 1982 -87. Individual interviews were completed for 99% of the subjects who were alive in grade 11 during the annual assessment. The subject's families represent the full socioeconomic range found in these communities. To determine the dropout rate, the enrolled subjects were tracked individually to all the schools they attended over the five year period or, if they dropped out, to their place of employment or residence. Dropout status was determined from information from the schools and from the subject's reports. Stepwise logistic multiple regression analyses were conducted .

Results - Early school dropout was reasonably predictable for this population. The group of students most vulnerable to early school termination could be identified by seventh grade. These were students with high levels of aggressive behavior, low level of academic performance, and who were overage. Each of these factors alone contributed to the likelihood of dropping out but taken in combination had the strongest

relation to early dropout. The results indicated that black teenagers did not show a higher dropout rate than white teenagers.

Strengths or weaknesses - A strength of this study is that it used interviews and school record information over a long period of time with a large sample.

Camayd-Freixas, Y. & Horst, L. (1986). A working document on the dropout problem in Boston Public schools: 1986 update. Boston, MA: Boston Public Schools. (ERIC Document Reproduction Service No. ED 284 928)

Purpose - This is a comprehensive study on the dropout problem in Boston's Public Schools. Its purpose was to provide specific information to school officials in Boston on the drop out problem, including dropout rates and demographic information.

Methodology - Statistical analyses were performed on the dropout data from the Boston Public School system covering the areas of students who drop out of school for a period of four school years, demographic descriptions of the population that drops out, studies of the causal factors associated with dropping out, and cohort studies of dropouts for the graduating classes of 1982-1985. The data analyzed was based on school system records. The report does detail the methodology used to conduct the study.

Results - Boston Public Schools had a 14.3% drop out rate in the school year 1985-86, 41 percent were female, 59 percent male, most of the dropouts left school in ninth or tenth grade, and

most dropouts performed poorly in academic subjects and on achievement tests.

Strengths or weaknesses - A weakness is that the methodology was not discussed which made it difficult to figure out how the researchers performed the study. The report was written for school officials who were more interested in the results than in the methodology. Another weakness was that the report was too long.

Curtis, J. (1983) Dropout prediction. (Report No. 82.56) Austin, TX: Austin Independent School District. (ERIC Document Reproduction No. ED 233 282).

Purpose - The purpose of this study was to construct a prediction model from readily available school information that aids in the identification of secondary students likely to drop out of school .

Methodology - From a review of the literature 24 variables related to dropping out were identified. Based on the information contained in the students records, the following variables were included for the model: grade point average, grade placement, sex, ethnicity, number of serious discipline problems. This Austin study was longitudinal covering four years. School leavers were classified into four groups; nonleavers, transfers, dropouts, and other or unknown. The original sample included 5,039 students and were enrolled in school who had birthdays during a specific time period. Discriminant analysis was used to determine how well dropping out could be predicted from readily available information in the district computer files. The students

included in the analysis were limited to nonleavers and dropouts. The analysis was run using SPSS discriminant program with a stepwise discriminant analysis procedure. Limited English Proficiency (LEP) status, reading scores, and math scores were added as variables and compared afterwards.

Results - The results show that the dropout rate for males was slightly higher than females. Hispanic students had the highest dropout rate followed by blacks, and whites. Students who have low GPAs, who are behind in grade for their age, who have been involved in serious discipline problems, who are female, and who are white or Hispanic have a higher probability of dropping out. The average number of serious discipline incidents is five times as high for dropouts. Using the prediction model, 70% of the dropouts were successfully identified.

Strengths or weaknesses - A weakness of this study is that special education students were not included in this study and only information from the student's files was used. Because of the source of information, limited variables could be measured.

Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Findings from a national study. Teachers College Record, 87(3), 356-373.

Purpose - In 1983, the National Center for Education Statistics (NCES) contracted with Educational Testing Service to conduct a study using NCES's HS&B Survey database. This study included a longitudinal analysis relating the growth and development of 1980 high school sophomores to their school experience over the period of 1980-1982. The purpose of this study was to

answer the following questions; who drops out?, why does one student drop out and not another?, what happens to dropouts during the time that their peers remain in school?, and what is the impact of dropping out on gains in tested achievement?

Methodology - Three different analyses were performed using data from the HS&B Survey. A descriptive analysis was used to describe who stayed in school and who dropped out between the sophomore and senior years. The students who stayed were compared in the following areas to the dropouts; ethnicity, socioeconomic status, family structure, home educational support system, ability and attitudes, and school behaviors. The path analysis and the value-added analysis were used.

Results - In their sophomore year students who became dropouts differed significantly from those who chose to remain in school. The major differences include background, educational achievement, and other school-related behaviors. Thirty percent of the dropouts reported leaving school during or before the 10th grade, 44% during or before the 11th grade, and 26% during 12th grade. Dropouts were disproportionately older, male, and from low SES families. The dropouts also had lower grades and lower test scores than the persisters.

Strengths or weaknesses - A strength of this study is that all of the literature reviews and the majority of the studies on dropouts referred to this study. Another strength is that the analyses are well conducted and thoroughly explained.

Fernandez, R. M., Paulsen, R., & Hirano-Nakanishi, M. (1989). Dropping out among Hispanic youth. Social Science Research, 18, 21-52.

Purpose - The purpose of this study was to compare the nature and extent of the dropout problem for Hispanics to that of non-Hispanic whites and blacks using data from the sophomore cohort of the HS&B Survey and to examine the presumed causes for dropping out for Hispanic and non-Hispanic white and black youth. This study also set out to develop models of dropping out for each group using family background, school performance, and other demographic variables and examine how successful these models are in explaining Hispanic and non-Hispanic differences in dropping out.

Methodology - Descriptive analysis was performed on the data from the HS&B Survey, using multivariate analysis. Hypotheses were given about the determinants of dropping out. Respondents were characterized by gender and ethnicity, then the analyses were performed.

Results- Dropout rates were as follows; 18.3% Hispanic, 16.8% black, 12.2% white. SES had little effect on dropping out for Hispanics and blacks. Regardless of race and ethnicity, scholastic performance and grade delay affect students' decision to remain in school or drop out. Among males, high achievement on the math test is a stronger deterrent for dropping out for Hispanics and blacks than for whites. Grades had a stronger effect on whites than on Hispanics or blacks. For females, grades tended to be a stronger predictor for dropping out among Hispanics than the other groups, whereas math test scores were more important for whites and blacks

than Hispanics. Grade delay plays a more prominent role in predicting dropping out for black and Hispanic females than for whites. Family responsibilities are likely to draw students from school, regardless of race and ethnicity.

Strengths or weaknesses - A strength of this study is that there was a very thorough descriptive analysis of HS&B Survey information and the results support the findings from other studies.

Gabriel, R. M. & Anderson, P. S. (1987). Identifying at-risk youth in the Northwest states: A regional database. (Report No. 019 889) Portland OR: Northwest Regional Educational Lab. (ERIC Document Reproduction Service No. ED 282 125)

Purpose - The purpose of this study was to utilize information from a regional database to illustrate the prevalence of at-risk youth within and across six northwest states. The analyses were presented to aid state-level decisionmakers in identifying the prevalence and distribution of students at-risk.

Methodology - The regional database acquired national data from the U.S. Census and Common Core of the data system from the National Center for Education Statistics. State-specific data were then acquired from each of six states and merged with the national data. Dropout rates are computed by determining the number of 16-19 year olds in a district, and subtracting from this total the number of students who are in school, have graduated, are in the military, or have attained a high school equivalency by other means.

Results - There is a variability in dropout patterns within and across the Northwestern states. As a result, targeting state assistance should vary by state. Dropping out of school is highly related to community contextual factors where communities with the highest percentage of adults who have not completed high school also have the highest percentage of 16-19 year olds who do not graduate from high school. The strength of this relationship exceeded that of family poverty, living in a rural setting, and other indicators traditionally though to be strong predictors of high school dropout rates. The results support the belief that low academic achievement is a likely predictor to dropping out. School districts with higher rates of poverty have higher percentages of students scoring in the lowest quartile of achievement tests. The variation in each of the indicators is far greater among schools than it is among districts or states.

Strengths or weaknesses - A weakness of this study is that the Census data at the time of the study was seven years old and Common Core data were from three to seven years old. There are certain limitations that go along with comparing data from different states that use different definitions and data collection procedures. Data from all these sources were aggregated district level totals, percentages, and averages. Since the data for this report was drawn from a variety of existing sources, it is difficult to patch them together so the results have significant meaning. A strength of this study is that the authors present indicators of student and family background, economic and employment status, social behavior and academic achievement.

Gastright, J. F., & Ahmad, Z. (1988, April). Dropout causes and characteristics: Do local findings confirm national data? Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Purpose - The purpose of this study was to document the results of one local study of dropouts and to compare local dropout characteristics with results from national studies.

Methodology - Descriptive data on the dropouts were obtained from school records from a large midwestern urban school system and interviews of dropouts were conducted by visiting teachers. The interview included questions on all areas of the dropout's life. There were some open-ended questions and some specific multiple choice questions. The results of the interviews were then compared to national statistical results.

Results - The study found that males dropout at a higher rate than females, dropouts came from very low income families living in poverty conditions (although the study stated they had a major problem collecting meaningful information from the dropouts on parent's income and occupation), 55% of the students left before completing the tenth grade, the average dropout was slightly over 18 years old, and there was a striking difference between dropouts and stay-ins in academic grades (80% of all dropouts repeated a grade). Course grades were a better predictor of risk than standardized test scores.

Strengths or weaknesses - A strength of this study is that it provides valuable information for somebody attempting to solve the dropout problem in the urban area where the study was conducted. The author compared local data to national

data to measure the extent of the problem in his geographic area compared to the rest of the country.

Helge, D. (1990). A national study regarding at-risk students. (Available from National Rural Development Institute, Woodring College of Education, Western Washington University, Bellingham, Washington, 98225)

Purpose - The purpose of this study was to compare the incidence of various types of at-risk students in rural, urban, and suburban school districts. The study also compared incidences of at-risk students with students who have disabilities. Incidences of categories of at-risk students in pre-school, elementary, middle, and high school levels were compared.

Methodology - A total of 1,200 surveys were mailed to school administrators in all states, with a response of 312. The sample's distribution based on community type was as follows: 185 respondents were from rural areas, 71 were urban, and 56 suburban. The respondents were asked to give their best estimates of the percentage of students falling into predetermined at-risk categories. After descriptive statistics from data were scrutinized, they were analyzed by a repeated-measures analysis of variance. SPSSX MANOVA program was used. The analysis considered three factors; community, risk factors, and disability.

Results - Rural school respondents estimated higher percentages of children in the at-risk categories. Almost eighteen percent of the non-handicapped rural high school students were estimated to be substance abusers, compared

with 10.1% in non-rural districts. Poor self-esteem is linked to at-risk conditions including teen pregnancy, delinquency, depression, substance abuse, dysfunctional families, and child abuse. The analysis suggests that social and economic strains facing rural students are at least as difficult as those facing inner city youth.

Strengths or weaknesses - A weakness of this study was that there may have been different interpretations of the questionnaire not only by individuals respondents, but between different categories by the same respondent. This is difficult to determine. Another weakness was that this study relied on information from teachers and school officials, not from the school records or from the at-risk students themselves.

Jay, E. D. & Padilla, C. L. (1987) Special education dropouts: The incidence of and reasons for dropping out of special education in California. (SRI Project No. 2544) Sacramento, CA: SRI International.

Purpose - The purpose of this study was to determine: (a) to what extent a dropout problem existed for special education students and how it compared with that of the total student population, (b) what is the relationship between student characteristics and the likelihood of dropping out, and (c) how district characteristics related to dropout rates for special education students?

Methodology - Analyses for this study were based on site visits to a small sample of districts and county special education offices in California, a mail survey of all district and county

special education offices serving secondary students (with a response rate of 50%), and data collected for the California Basic Educational Data System. Data from the questionnaires were manually edited and verified and SAS programs were applied to the results. The definition for dropout was the one used by the state of California; students who left the district prior to graduation or completion of formal education or legal equivalent--GED or CHSPE--and, did not, within 45 school days, enter a public or private educational or school program (as documented by a written request for a transcript from that institution).

Results - Approximately 6.6% of secondary special education students and 1% of those served in counties dropped out in the 1985-86 school year compared to a 9% rate for all secondary students. (See the study explanation for the lower rate including the fact that potential special education dropouts are referred to alternative education programs that do not have classes specifically labeled as being for special education students) Fewer than 25% of the districts surveyed had dropouts who had a primary disability other than a learning disability. Learning disabled dropouts were likely to be characterized as having poor academic performance and poor social adjustment, frequent absenteeism, little parental support, low participation in extracurricular activities, low SES, and alcohol or drug problems. Districts with speech-impaired dropouts, communicatively disabled dropouts, and severely disabled dropouts characterized them as having poor social adjustment.

Strengths or weaknesses - A weakness of the study is that measurement error in the data from the CBEDS and the

questionnaire may include the following; (a) continuation students may not be included in total student population for some districts, (b) some districts count students who are continuing their education as dropouts (as in trade school), (c) districts differ on the amount of effort spent tracking students, and (d) districts interpret differently entry into another educational institution. In addition the characteristics were based on teacher's descriptions of the dropouts rather than school records or interviews with the dropouts. A strength is that this is one of the few empirical studies that focused on dropouts with disabilities.

Jenifer, W. A. (1989). Predictive characteristics of high school dropouts. (Doctoral dissertation. University of Michigan, 1988). Dissertation Abstracts International, 42, AAD89-22759.

Purpose - The purpose of this study was to identify characteristics that most accurately describe ninth-grade high school students who dropped out of school. The study was designed to verify the general list of dropout characteristics and to determine any characteristics that differed between ninth-grade students who dropped out and those who stayed in school.

Methodology - The data for the study was collected from two high schools on 265 randomly selected students. Two cohort groups were established in each school, one of students who withdrew before the end of the 1986-87 school year and the other of those who stayed. The researcher administered his survey to the students. T-test and chi-square were performed to test the hypotheses.

Results - The study found that the mean score for the California Achievement Test and grade point average between those who stayed in school and those who left was not significant in determining dropouts. The study also found that the difference in the results of gender distribution and socioeconomic status between dropouts and persisters was statistically significant.

Strengths or weaknesses - A strength of this study is that the author explains every aspect of the study thoroughly. This data also supports results of other larger studies

Kaeser, S. C. & Hooper, P. K. (1983). Seventh and eighth grade dropouts in Ohio: Research on who they are, why they leave, and how school districts count them. (Report No. 017 038). Cleveland, OH: Citizen's Council for Ohio Schools. (ERIC Document Reproduction No. ED 236 488)

Purpose - The purpose of this study was to investigate the characteristics of seventh- and eighth-grade students who leave school and the reasons they do so.

Methodology - School personnel in 39 Ohio school districts were interviewed through phone calls and selected school visits. Discrepancies in the local school district data collection methodologies were found, as were a variety of definitions of dropout. The study draws on descriptive information schools have on their dropouts including the reasons they left school. This research was limited to seventh- and eighth- grade dropouts because dropping out at this level is on an increase. The sample of 39 districts was chosen by the frequency of seventh- and eighth-grade dropouts and was a diverse sample.

Telephone interviews were conducted and site visits were done as a follow-up. Information about the dropouts was from the school records. Data were collected and analyzed.

Results - The largest single category of dropouts in this study was those students whom districts could not locate, which does not necessarily mean they dropped out. 70% of the seventh-grade and 48% of the eighth-grade dropouts were in this category. Truancy and serious misbehavior leading to expulsion characterized the second largest group. The three common characteristics based on the reasons the students left school were; pregnancy, overage for grade due to repeated retention, and students who have runaway or been places in institutions. Males were more likely to dropout than females.

Strengths or weaknesses - A weakness of this study is that the aggregate data for the state and specific data for individual districts was not accurate because there is not a clear definition of who should be counted as dropouts. In addition, because of the lack of a uniform definition of dropout data cannot be compare between districts. A strength of this study is that, although it addresses only seventh- and eighth-grade dropouts and may not be significant on its own, when compared with other studies it contributes meaningful information.

Martin, D. L. (1981) Identifying potential dropouts: A research report. Frankfort, KY: Kentucky State Department of Education. (ERIC Document Reproduction No. ED 216 304)

Purpose - The purpose of this study was to identif certain family, personal, and subjective characteristics that contribute

to students dropping out of the Kentucky educational system and to predict which students will leave early.

Methodology - Previous research was reviewed and a list of 51 characteristics was determined to be related to students dropping out of school. The relationship between the 51 characteristics and the independent variable of dropout/persister was examined and a descriptive profile was developed using the total population studied and four subsamples of the population. Finally, five regression equations (one for each profile) capable of predicting which students were likely to drop out of school were constructed. The sample consisted of 536 dropouts, 273 from urban areas, 263 from rural areas. Each dropout was matched with a randomly chosen sample persister from the same grade and age. Each dropout completed a questionnaire devised by the Kentucky State Department of Education. The questionnaire was completed and returned by 78% of the sample through the mail. The remaining 22% were interviewed over the phone. The persisters completed the questionnaire in school settings. The data were coded onto forms, keypunched, and verified. Descriptive profiles were developed, various hypothesis tested, and regression equations constructed with SAS computer procedures.

Results - The study contains a list of 32 statements labeled "conclusions." Among them are, (a) dropouts were more likely to come from broken homes, (b) the educational level of dropouts' fathers and mothers were less than those who did not dropout, (c) dropouts came from lower income families, (d) dropouts had more siblings who had dropped out, (e) dropouts were overage for their grade when they left school, (f)

dropouts were absent more often in every grade, (g) dropouts were retained more often, and (h) dropouts were referred to the principal for misbehavior more than persisters.

Strengths or weaknesses - A weakness of this study is that the results are initially presented in statistical terms. The 32 conclusion statements seem a little premature based on the information presented. The reader is led to question what information was not included in the 32 statements and what relationships were not found.

Martinez, R. (1986). Minority youth dropouts: Personal, social, and institutional reasons for leaving school. Colorado Springs, Colorado: Colorado University, Center for Community Development and Design. (ERIC Document Reproduction Service No. ED 280 934)

Purpose - The purpose of this study was to examine the reasons given by dropouts for having withdrawn from school, to examine the problems experienced by dropouts in school prior to their withdrawal, and to provide recommendations for reducing the dropout problem among minority youth. These results were compared to determine if significance existed between minority and "dominant" group dropouts.

Methodology - Dropouts were identified and mailed a release form in order to participate in the project. Interviews were conducted with the 53 dropouts who replied (this low number was a problem which is explained in detail in the study). Of the 53 interviews 25 were white, 19 were Hispanic, 5 were black, and 4 were classified as other. Two groups were formed for the purposes of comparison, one dominant group and one

minority group. Extensive interviews were conducted with each participant and the results are presented in this study.

Results - The study found that the following characteristics are typical of dropouts; low socioeconomic status, low grade average before leaving school, truancy while in school, and lower levels of intelligence. The study also found that all of these characteristics are greater in the minority groups than in the dominant groups.

Strengths or weaknesses - A strength of this study is that it supports the majority of the other studies related to characteristics of dropouts but gives additional information by comparing dominant and minority dropout groups. Data were well presented in chart and narrative form. Another strength is that a thorough explanation of methodology is provided which allows for further insight into the study.

McCaul, E. (1988, April) Rural public school dropouts: Data from high school and beyond. Paper presented at the Annual Conference of the New England Research Organization, Rockland, ME.

Purpose - The purpose of this study was to determine what the HS&B Survey data set revealed about the characteristics, attitudes, and school experiences of rural dropouts; what the difference was between rural dropouts and rural persisters relative to gender, grade, test scores, self-concept, locus of control, ratings on the importance of life values, and ratings of school conditions; and what the difference was between rural high school dropouts and their urban counterparts relative to

life activities, reasons for dropping out, ratings of the importance of life values, and ratings of school conditions.

Methodology - Unspecified statistical analyses were performed on the data sets from the HS&B Survey to determine the answers to the questions stated above.

Results - Rural dropouts had lower grades and lower achievement test scores than rural stayers. There was a pronounced difference between rural dropouts and stayers relative to socioeconomic status. The rural dropouts came from lower socioeconomic status backgrounds than rural stayers. In their ratings of school conditions, rural dropouts rated their schools lower on all items. Rural dropouts did have a lower self-esteem (statistically significant in 1980 but not 1982). Urban dropouts were more likely black or Hispanic; rural dropouts were more likely American Indian or white. Rural dropouts were more likely to report getting married as a reason for dropping out.

Strengths or weaknesses - A weakness of this study is that there was no description of the methodology given beyond "analyses were conducted." Another weakness was that only the rural dropouts and stayers from the New England/Mid-Atlantic regions were analyzed. A strength is that the study is an important contribution to the empirical studies focusing on dropouts from rural locations.

Mensch, B. S. & Kandel, D. B. (1988). Dropping out of high school and drug involvement. Sociology of Education, 61(April), 95-113.

Purpose - The purpose of this study was to examine the relationship between substance abuse and failure to complete high school. Answers were sought to the following questions: are the use of drugs and dropping out of school related to each other? Does drug use have a unique effect on and is it a predisposing factor for dropping out of school (controlling for individual attributes)? Do dropouts who eventually acquire an equivalency certificate have different histories of drug use than those with no high school diploma?

Methodology - The data is taken from a nationally representative sample of young Americans from the National Longitudinal Survey of Youth, an ongoing survey of over 12,000 young people who were interviewed in 1979 and who have been interviewed annually since then. Discrete-time and event-history from dropping out were estimated. The definition of dropout was "having left school at some point in one's educational career." Individuals with GEDs were considered dropouts and this rate (22.3%) included all grades not just 10th and 11th. Including the GEDs as graduates rather than dropouts, the rate was reduced to 14.8%.

Results - Dropouts reported significantly higher rates of use of all classes of drugs than did students who stayed in school. The most important contribution of this study is the documentation of the impact of involvement in drugs as an additional and unique contributor to early school leaving, controlling for other factors that are known to be important risk factors for the

interruption of schooling. The younger the initiation into alcohol, marijuana, and other illicit drugs for men, and cigarettes and marijuana for women, the greater likelihood of leaving school without a diploma. The study shows that more research needs to be conducted focusing solely on the relationship between drug use and dropping out.

Strengths or weaknesses - A weakness of this study is that the dropout definition is poor, not accounting for those who may go back to school. A strength of this study is that the researchers used a very large sample size from a national data base making the results more generalizable. Another strength of this study is that it focused on one area specifically and provided more detailed insight into the relationship between substance abuse and dropping. This study definitely puts substance abuse into the list of characteristics of dropouts and shows what a great effect it can have. An additional strength is that the study relies on information from interviews with dropouts as opposed to teachers or school records.

Pallas, A. M. (1984). The determinants of high school dropout. (Doctoral dissertation, The Johns Hopkins University, 1984). Dissertation Abstracts International, 45, 12-A, No. AAD85-01672. (University Microfilms No. 8501672)

Purpose - The purpose of this study was (a) to consider social background variables and the perspectives of Academic Performance, Social Disability, and Accelerated Role Transitions as predictors of why youth drop out of high school, (b) to develop models expressing dropout as a function of the three perspectives, background factors and school truancy, as well as background factor alone.

Methodology - The data used in this study were from the HS&B Survey base year and first follow-up data files. Four groups of students from the 1980 Base Year sophomore cohort were identified: students still enrolled in their base year schools, dropouts, early graduates, and transfers. Two sources of data were used, the base year questionnaire administered to the sophomore cohort and score on a battery of cognitive tests as a measure of academic ability. The research method utilized was logistic regression.

Results - Each of the three perspectives contributed uniquely to the prediction of dropping out, with high school grade performance, self-reported school delinquency, full time work involvement, and dating behavior being especially important. Truants were also especially at-risk of dropping out. Among the background factors, highly able students and students from advantaged social backgrounds were more likely to stay in school. When these factors were controlled, black and Hispanic youth were less likely to drop out of school than whites. Students from the northeast regions of the country were less at risk of dropping out than those from the south and west.

Strengths or weaknesses - A strength of this study was that the approach using the three different perspectives was unique and provides interesting insights. Another strength is that this was a national study using a large data base of information so the results are conducive to generalization.

Peng, S. S., & Takai, R. T. (1983). High school dropouts: Descriptive information from high school and beyond. (NCES-83-221b). Washington, DC: National Center for Education Statistics.

Purpose - The purpose of this study was to find out information on dropouts. Using the data from the HS&B Survey, the study provided descriptive information about dropout rates by various subgroups and the reasons for dropping out.

Methodology - In 1980, 30,000 sophomores and 28,000 seniors in high school were surveyed from a representative sample of 1,015 schools. In 1982, 12,200 of the seniors and all of the sophomores who remained at the same schools were recontacted. The survey included 50% of the sophomores who had left the schools they attended in 1980. The response rate was 90%. Out of this group, the dropouts were identified and asked to complete a questionnaire inquiring about their reasons for dropping out and their future plans.

Results - In 1980, 14% of high school sophomores left school before completing the requirements for graduation. Many of these students were from lower socioeconomic backgrounds. Male sophomores were more likely to dropout than female sophomores, American Indian and Alaska Natives had the highest dropout rate of any minority group, and many of the dropouts showed poor academic performance.

Strengths or weaknesses -A strength of this study is that it was a huge national study that was conducted by the National Center for Education Statistics. Another strength is that the

response rate was very high and a lot of different data were collected so that there was an abundance of information to be analyzed.

Poole, M. E. & Low, B. C. (1982). Who stays? Who leaves? An examination of sex differences in staying and leaving. Journal of Youth and Adolescence, 11(1), 49-63.

Purpose - The purpose of this study was to examine the major determinants of the staying and leaving process for samples of male and female adolescents. The key concern was to identify the combined contribution of home background, school experiences, and personal ability and attitudinal factors for female and male leavers and stayers, with a view to determining whether the patterning of influences is the same or different for male and female adolescents.

Methodology - Subjects were selected by a three stage sampling procedure. The final sample included 217 male leavers, 245 female leavers, 179 male stayers, and 155 female stayers. Standard tests and inventories were used to obtain measures of intellectual, attitudinal, vocational, and personality areas. These tests are listed in the study. Twelve of the independent variables were derived from questionnaire items. The third set of variables was derived from a large number of statements about aspects of school, parents, peers, and value orientation. The tests and the questionnaire were group administered. The attitude statements were factor analyzed to obtain a smaller set of underlying factor analyses. A discriminant analysis was conducted with predictor variables from the three sources (tests, questionnaires, and statements).

Results - Four profiles characterizing each group emerged: Female stayers are likely to be students who obtain higher grades, conform to school values, are influenced by teachers, display high academic achievement motivation, possess high organizational skills and verbal ability, come from higher SES families. Male stayers are likely to be students who achieve lower grades, do not conform to school values, are not influenced by their teachers, display high academic achievement motivation, possess high organizational skills and verbal ability, come from high SES families. Female leavers are likely to be students who obtain higher grades, conform to school values, are influenced by teachers, display low academic achievement motivation, possess low organizational skills and verbal ability, come from low SES families. Male leavers are likely to be students who achieve lower grades, do not conform to school values, are not influenced by their teachers, display low academic achievement motivation, possess poor organizational skills and verbal ability, come from low SES families.

Strengths or weaknesses - A strength of this study is that it involved a large sample size and the researchers administered tests and questionnaires themselves rather than relying on school records that can often be misleading or inaccurate. The study looked at a variety of different variables including attitude.

Poulos, N. (1986). The Detroit early school leavers project: A profile of dropouts. (Report No. 025 479) Lansing, MI: Michigan State Department of Education. (ERIC Document Reproduction Service No. ED 281 930)

Purpose - The purpose of this study was to identify a dropout pattern or profile which could be used to more readily identify at-risk youth in Detroit Public Schools and to get information from dropouts concerning personal background, family background, home environment, peer group and teacher relationships, reasons for leaving school, and services which could have kept them in school or would encourage their reenrollment.

Methodology - A survey instrument was formulated and field tested. The target for the survey were students who left school during the 1982-84 school years. School attendance officers interviewed these dropouts during the summer of 1985. Pertinent data were analyzed, tabularized, and described. Starting with 1,857 dropouts, attendance officers were only able to get complete firsthand interviews from 532.

Results - The typical dropout was black, 16-17 years old, in ninth or tenth grade when leaving school, and probably overage by two years. If the dropout was female, there was a two in five chance she was pregnant at the time of dropping out. The dropout had three or more siblings with a two in five chance that at least one sibling had dropped out of school. The dropout usually came from a single parent home with a one in three probability that no one in the house was employed at the time of leaving school. Slightly more than one half of the dropouts had negative feeling about leaving school. Only one

eighth of the dropouts had no close friends at the time of leaving school. However, one half had one or more close friends who had dropped out of school. Fewer than one fifth said they did not get along with their school counselor or teachers. A lot of generalizations about dropouts were made from the data.

Strengths or weaknesses - A strength of this study is that the results are base on information from personal interviews with dropouts.

Rice, W. K., Toles, R. & Schulz, E. M. (1988). Retention in grade school and the impact of high school graduation - Continuing study of factors leading to terminal decisions. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Purpose - The purpose of this study was to continue an on-going series of Chicago Public Schools dropout studies with an analysis of the high school class of 1986. The focus of this study was on grade retention as a predictor of dropout behavior.

Methodology - Students of the class of 1986 who entered the school system at a normal age for kindergarten or the primary grades were followed until they graduated or dropped out. The dropout and graduation rate for this group of students is compared with the entire class of 1986. Three student attributes were reviewed in relation to the dropout rate; gender, age at entry into high school, and eighth grade reading grade equivalent scores. The first part of the study assumes that the overage student had been retained in elementary

school. To account for this, the researchers matched the class of 1986 against a file of students who started school at a normal age.

Results - In the class of 1986, males had a higher dropout rate than females (47.8% vs. 35.5%). For every female who dropped out, two females graduated. For every male who dropped out, another one graduated. Asian students had the lowest dropout rate (15.4%). The dropout rate increased sharply as the student's entry age increased. Entering high school at 15, the dropout rate was 32.2 percent, at 16 it was 68.3%. The dropout rate was strongly associated with the students eighth grade equivalent reading score. The combination of being overage and having low reading scores significantly added to the likelihood that a student would dropout.

Strengths or weaknesses - A weakness of this study is that there was not enough information provided about the methodology used by the researchers. A strength of this study is that it focuses on one factor and confirms that grade retention is a significant factor in the dropout decision.

Rumberger, R. W. (1983). Dropping out of high school: The influence of race, sex, and family background. American Educational Research Journal, 20(2),199-220.

Purpose - The purpose of this study was to examine the extent of high school dropout problem and investigate the reasons students leave school and the underlying factors influencing their decisions. This study focused on the role of race, sex, and family background in dropping out.

Methodology - This study examined the influence of family background and other factors among race and sex groups on the propensity to drop out. Data for this study were from the National Longitudinal Survey of Youth Labor Market Experience. The researchers analyzed this data using statistical methods including performing stimulations to calculate the contribution of specific variables to the probability of dropping out.

Results - Family background is a powerful predictor of dropout behavior. Students from a lower socioeconomic background are much more likely to leave school before graduation than students from higher socioeconomic background. The significant influence of family background suggests that the tendency to drop out early begins early in a student's life.

Strengths or weaknesses - A strength of this study is that it was the second most widely cited source in the literature on dropout characteristics. The research conducted after this study supports these conclusions. Another strength of this study is that it covers an area that other do not, specifically the influence of various factors on dropping out for separate race and sex groups.

Rumberger, R.W., Ghatak, R., Poulos, G., Ritter, P. L., & Dornbisch, S. M. (1990). Family influences of dropout behavior in one California high school. Sociology of Education, 63, (October), 283-299.

Purpose - The purpose of this study was to explore a series of variables that reveal some of the mechanisms by which

families influence student's decisions to drop out of school and to contribute to the understanding of how families influence dropout behavior.

Methodology - A matched-pair design was employed that allowed comparisons between similar types of students to determine how differences among families may contribute to dropout behavior. This study is part of a larger ongoing school and family project. The dropout population of 114 was divided into two groups; one that participated in the survey (which had been given over a number of years and provided information such as family background and school experiences) and one that did not. The group that participated in the survey was used to investigate the relationship between family and individual characteristics and dropout behavior. The second group was compared with other groups of students on basic demographic and school-related variables. The final comparison group consisted of 48 continuing students who were matched one to one with the 48 dropouts. The students were matched on the basis of key variables that are often associated with dropping out; sex, ethnicity, grade level, family structure, and self-reported grades. A series of paired t-tests based on these matched samples, along with independent t-tests between dropouts and all other students, was used to test hypotheses about the influence of family and individual factors on dropout behavior.

Results - Although dropouts in this school are not disproportionately ethnic minorities or from single-parent household, they do have lower grades, poor attendance, and more disciplinary problems than other students. The analysis identified three major differences between the families of

dropouts and the families of other students. Dropouts were more likely to come from families with permissive parenting style. Parents of dropouts were more likely to use negative sanctions and emotions in reaction to their child's academic performance. Finally, the parents of dropouts reported that they were less involved with the child's schooling. These findings lead the authors to some possible explanations about how parents influence dropout's behavior and why differences in family practice arise. Each of the family influences in the study affects academic performance which is a major predictor of dropping out.

Strengths or weaknesses - A weakness of this study is that because it was conducted with a relatively small sample in a California school, generalizing the conclusions is risky. However, the findings do support other dropout studies and the credibility of the authors lend weight to their conclusions. An strength is that it went into great depth on the ways a family influences a student's decision to dropout.

Stedman, J. B. (1988) Dropping out: The educational vulnerability of at-risk youth. (CRS Report for Congress No. 88 417-EPW) Washington DC: Congressional Research Service.

Purpose - The purpose of this study is to investigate the role of background characteristics and in-school and out-of-school experiences on public high school dropout rates using data on the 1980 sophomore class from HS&B Survey.

Methodology - This is a descriptive study focusing on school completion rates for three groups; youth from single-parent

families, youth from poor families, and youth who form families while still in secondary school. Information on the prevalence of at-risk factors and the extent to which these factors overlap is presented. The relationship between the at-risk factors and two outcomes, dropping out after sophomore year and receiving a high school degree within four years of the class's graduation date, are also presented. The analysis goes on to explore whether the process leading to dropping out is different for students whose background puts them at-risk from those who don't.

Results - The study found that membership in the at-risk groups stated above is strongly associated with dropping out of school. Dropping out is influenced by an interaction between socioeconomic background and in-school experiences. Sophomores from low-income families were twice as likely not to graduate two years later as were students from high-income families. Students from single parent families were one and a half times more likely to leave school before graduation. Students who got married while still in school were five times as likely to dropout out as those who did not. Those who became parents failed to graduate on time over four times as often as those who did not.

Strengths or weaknesses - A weakness of this study is that it was difficult to interpret how the study's data were analyzed although descriptive information is in the appendices of the study. A strength of the study is that it provides an interesting and more thorough perspective on HS&B Survey data. Another strength is that the study was conducted by Congressional Research Service which lends to its credibility.

Valverde, S. A. (1987) A comparative study of Hispanic high school dropouts and graduates. Education and Urban Society, 19(3), 320-329.

Purpose - This study was designed, controlling as much as possible for obvious demographic variance, to provide a comparison of characteristics between groups of Hispanic students who drop out of school before graduation and groups who graduate.

Methodology - The study sample consisted of 104 Hispanic, primarily Mexican American, students from a large urban school district in the southwest. Fifty-two were graduates and 52 were dropouts with equal numbers of males and females and Limited English Proficient (LEP) and non-LEP. A structured interview and field notes taken immediately before and after the interview provided the database for this study. The researcher conducted all 104 interviews.

Results - The dropouts and graduates came from similar low SES neighborhoods and similar parental educational and occupational levels. The most notable difference between dropouts and graduates was peer group relationships, dropout or graduate siblings, grades, and English-language proficiency. The impact of peer group was second only to grades in determining a student's decision to dropout or remain in school than any other factor with the exception of grades. Graduates participated in school related activities while dropouts did not. Less than C average was reported by 54% of the dropouts but only 7.7% of the graduates.

Strengths or weaknesses - A weakness of this study is that no charts or representative samples of the results were included so one must rely totally on the researcher's interpretation of the results. A strength of this study is that it is one of the few local studies focusing on Hispanics. Another strength is that the researcher performed interviews herself increasing the likelihood of consistent valid responses. The information is based in the interviews with dropouts rather than on teachers' perceptions or other secondary sources.

Velez, W. (1989). High school Attrition among Hispanic and non-Hispanic White youths. Sociology of Education, 62(April), 119-133.

Purpose - The purpose of this study was to estimate the effects of specific factors on the odds of dropping out of among tenth-grade students of Chicano, Cuban, and Puerto Rican ethnic origin. Non-Hispanic whites were included in this study for comparison.

Methodology - This study used the sophomore cohort of the data set from the HS&B Survey. All of the Hispanic students whose records were complete were selected, which resulted in 1,116 Chicano, 195 Cuban, and 192 Puerto Rican students. A random sample of non-Hispanic students was drawn resulting in 4,170 cases. HS&B Survey sample weights were used to compensate for the missing data. The logit model was applied to each group. Dropout was defined as "any 1980 high school sophomore who was neither a high school graduate nor enrolled in school in 1982." Logistic models of prediction were developed for all subgroups and comparisons among the

resulting models were presented to assess the relative significance of the variables among these groups.

Results - Students who had been suspended had higher odds of dropped out. Among Chicano students, the most important factors in predicting dropout status were confrontation (cutting classes and getting suspended), accelerated role taking, and background attributes (girls and older students were more likely to drop out). Among Cuban students, the more important factors were involvement in disciplinary issues and family background (students from higher socioeconomic background were less likely to drop out). Among Puerto Rican students the more important factors were confrontation and background characteristics (girls and older students were more likely to dropout and students with two parents were less likely to drop out). Among non-Hispanic white students, the more important factors were accelerated role taking and background attributes (girls and older students were more likely to drop out).

Strengths or weaknesses - A weakness of the study the HS&B Survey's omission of students who dropped out before the spring of 1980, which may mean that the estimates of the dropout rate for Hispanics was low.

Wagner, M. (1991). Dropouts with disabilities: What do we know? What can we do? (SRI Project No. 300-82-0054) Sacremento, CA: SRI International.

Purpose - The purpose of the National Longitudinal Transition Study of Special Education Students is to provide information to practitioners, policymakers, researchers, and others regarding the transition of students with disabilities from secondary

school to early adulthood. This included an examination of secondary school completion by students with disabilities who left school in the 1985-86 or 1986-87 school years.

Methodology - Data were collected from school records, telephone interviews with parents, and from a survey of educators in schools. Multivariate analysis techniques were conducted and the descriptive analyses are base on crosstabulations of two or three variables (academic performance, absenteeism, and dropping out).

Results - A significantly higher percentage of students with disabilities drop out of school than students without disabilities. Dropping out was found to be a culmination of a cluster of school performance problems including high absenteeism and poor grade performance. The overall dropout rate for students with disabilities was 43% compared to 24% for students without disabilities. Although high absenteeism and course failure are important contributors to dropping out, the majority of students who missed school and failed courses persisted in school.

Strengths or weaknesses - A weakness is that there was little information in the report on methodology making it difficult to judge its adequacy. Another weakness is that the author failed to define dropout and the criteria which determined dropout status. A strength of this study is that it is one of the few national studies focusing of students with disabilities.

Wilcynski, M. M. (1986). A study to determine the feasibility of identifying potential high school dropouts in elementary school. (Doctoral Dissertation, The Univesity of Iowa, 1986) Dissertation Abstracts International, 47, 07-A. (University Microfilms No. AAD86-22821)

Purpose - The purpose of this study was to determine how selected characteristics that exist among elementary age children attending school in an urban Iowa school district can help predict the students who will leave school prior to high school graduation. Research questions were: Do dropouts and graduates differ significantly on selected identical variables relating to students behaviors, achievement, abilities and demographics? and What are the individual and multiple relationships of the selected variables with student dropouts and high school graduates?

Methodology - A population of 100 dropouts and 96 graduates were identified using a predetermined selection process. Based on characteristics identified through a literature review, characteristics were grouped into three clusters; demographic, school behaviors, and academic/intellectual abilities. All data from this study were obtained from the cumulative records of students, recorded on collection sheets, and keypunched. The SPSS was used to analyze the data. The programs used were t-test, Chi-square, and simple and multiple regression analysis.

Results - There were significant differences between dropouts and graduates in 18 of the 20 characteristics. No significant differences were identified in the areas of gender and number of siblings. The academics/intellectual cluster had the greatest relationship with the dropout and graduate groups. The most

significant characteristics were students' letter grades in social studies and composite score of the Iowa Test of Basic Skills. In the school behaviors cluster, the average daily attendance and retention variables were of greatest influence. In the demographic cluster, the two most influential characteristics were the father's educational level and the number of elementary centers attended by a student. The author concluded that the ability to predict whether elementary students would become high school dropouts or graduates is limited.

Strengths or weaknesses - A weakness of this study is that the only source of information was from the student's cumulative file. A strength of this study is that the methodology was presented thoroughly with very good interpretation. Another strength is that the researcher used a good sample size.